#### STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES

FORM 3

|   |                | DIVIS                 | SION OF C       | IL, G    | SAS, AND M                                 | INING  |                                    |            |                                      |                    |              |
|---|----------------|-----------------------|-----------------|----------|--|--|------------------------------------|------------|--------------------------------------|--------------------|--------------|
|   |                | APPLICATIO            | N FOR PER       | MIT 1    | O DRILL                                    |  |                                    | 5. MI      | NERAL LEASE N                        | IO: 6. S           | JRFACE:      |
| 1A. TYPE OF WORK: DRILLY REENTER DEEDEN |                |                       |                 |          |  |  | ML-47974                           |            | TRIBAL                               |                    |              |
| IA. I THE OF WO                         | JRK: DRI       | ,LUŽ ER               | EENTER          | L        | _ DEEPEN                                   |  |                                    | 7. IF      | 7. IF INDIAN, ALLOTTEE OR TRIBE NAME |                    |              |
| D TYPE OF MEI                           |                | [] c.c. o=u=n         | <u> </u>        | 7        |  |  |                                    |            |                                      | TRIBE              |              |
| B. TYPE OF WEL                          | T [OIL         | GAS OTHER             |                 | SINGL    | E ZONE   MULTIF                            | PLE ZONE   |                                    | 8. UN      | IIT or ca agre                       | EMENT NA           | ME:          |
|   |                |                       |                 |          |  |  |                                    |            |                                      | l/A                |              |
| 2. NAME OF OPE                          | -              |                       |                 |          |  |  |                                    | 9. W       | LL NAME and N                        | IUMBER:            |              |
|   |                | STAR EXPLORATI        | ON & PRODU      |          |  |  |                                    |            |                                      | -32-15 <b>-</b> 19 |              |
| 3. ADDRESS OF                           |                | VERNAL STATE          | UT DID          | - 1      | PHONE NUMBER:                              |  |                                    | 10. F      | IELD AND POOL                        | ,                  |              |
| 4. LOCATION OF                          |                |                       |                 | 1078     | (435) 781-4                                | 331  |                                    |            |                                      | IGNATE             |              |
| AT SURFACE:                             | •              | AL PRAIL              | 24×             | 30       | 7.474964                                   |  |                                    | - 1        | TR/QTR, SECTI                        | ON, TOWN           | SHIP, RANGE, |
| AT PROPOSED F                           |                | 7 3/4                 | 99474           | - ,      | 109.815014                                 | /  |                                    |            | MERIDIAN:                            |                    |              |
| AT PROPOSED I                           |                | NCE IN MILES AND DIR  | ECTION EROM N   |          | •  |  |                                    | NEI        |                                      | <u> 15S</u>        | 19E          |
|   | 5.0., .        |                       | ES SOUTH OF OL  |          |  | FFICE.   |                                    |            | 12. COUNTY:<br>UINTAH                |                    | 13. STATE:   |
|   |                |                       |                 |          |  |  |                                    |            | OINTAN                               |                    | U GIAN       |
| 15. DISTANO                             |                | PROPERTY OR LEASE     | E LINE(FEET)    | 16.1     | NUMBER OF ACRES                            | IN LEASE:  |                                    | 17. NUME   | BER OF ACRES                         | ASSIGNED           | TO THIS WELL |
|   | 4              | 160 + /               |                 |          | 1920                                       |  |                                    |            |                                      | 40                 |              |
| 18. DISTANC                             | E TO NEAREST   | WELL (DRILLING, CON   | APLETED OR      | 40.5     | PROPOSED DEPTH                             |  |                                    | 20 DONE    | DESCRIPTION:                         |                    |              |
|   |                | ON THIS LEASE (FEET)  |                 | 19. F    | 11,950' MD                                 |  |                                    |            | DESCRIPTION:                         |                    |              |
|   |                |                       | •               | 1        | 11,330 1810                                |  |                                    | 300        | 003033                               |                    |              |
| 21. ELEVATIONS                          | S (SHOW WHET   | HER DF, RT, GR,ETC.): | <del></del>     | 22 /     | ADDROYIMATE DATE                           | MODE   | III STADT.                         | 22 ESTI    | MATER RUBATI                         | ON                 |              |
|   | 8135.3' G      |                       | •               | 22.7     | 22. APPROXIMATE DATE WORK WILL START: ASAP |  | 23. ESTIMATED DURATION:<br>30 DAYS |            |                                      |                    |              |
| 24                                      |                |                       | DDODOO          | <u> </u> |  |  |                                    |            |                                      |                    |              |
| SIZE OF HOLE                            | CASING         | SIZE, GRADE, AND WE   | IGHT PER FOOT   | ED CA    | SING AND CEMI<br>SETTING DEPTH             | ENTING   |                                    | OF OHANT   | ITY, YIELD, AND                      | OLUDDA             | VEIOUE       |
| 12 1/4                                  | 9 5/8          | J-55                  | 36              | _        | 500'                                       |  |                                    |            | CEMENT CA                            |                    |              |
| 8 3/4                                   | 7"             | HCP-110               | 26              |          | 5550'                                      | <del>                                     </del> | <u> </u>                           | / CITED    | OLIVILIAT OX                         | LCOLATI            | 0143         |
| 6 1/8                                   | 4 1/2          | P-110                 | 13.5            |          | TD   |  |                                    |            | <del></del>                          | <del></del>        |              |
|   |                |                       |                 |          | -  |  |                                    |            |                                      | ***                |              |
|   |                |                       |                 |          |  |  |                                    |            |                                      |                    |              |
|   |                |                       |                 |          |  |  |                                    |            |                                      |                    |              |
|   |                |                       |                 |          |  |  |                                    |            |                                      |                    |              |
| 25                                      |                |                       |                 |          | ATTACHMENT                                 |  |                                    |            |                                      |                    |              |
| VERIFY THE FOL                          | LOWING ARE A   | TTACHED IN ACCORDA    | ANCE WITH THE   | UTAH C   | IL AND GAS CONSE                           | RATION G   | ENERAL RULE                        | ES:        |                                      |                    |              |
| []                                      |                |                       |                 |          |  |  |                                    |            |                                      |                    |              |
|   |                | D BY LICENSED SURVEY  |                 |          |  | LETE DRILL                                       |                                    |            |                                      |                    |              |
|   | DIVISION OF W  | ATER RIGHTS APPROVA   | L FOR USE OF WA | NTER     | FORM                                       | 5, IF OPER                                       | ATOR IS PERS                       | SON OR CON | IPANY OTHER T                        | HAN THE LE         | ASE OV       |
| <del></del>                             |                |                       |                 |          |  |  |                                    |            |                                      |                    |              |
| NAME (PLEA                              | E DOINT        | lon Mala              |                 |          |  |  |                                    |            |                                      |                    |              |
| NAME (FLEA)                             |                | an Nels               | OII             |          |  | TITLE  | Regulator                          | y Attairs  |                                      |                    |              |
| SIGNATURE                               | SAX'           | nylak                 | $\mathcal{M}$   |          |  | DATE   | 44/47/00                           |            |                                      |                    |              |
|   | /F W           |                       |                 |          |  | DATE   | 11/17/06                           |            |                                      |                    |              |
| (This space for S                       | tate use only) |                       |                 |          |  |  |                                    |            |                                      |                    |              |
|   | 1              | 110 211-              |                 |          |  |  |                                    |            |                                      |                    |              |
| API NUMBER                              | ASSIGNED:      | 43-047-               | 38877           |          | APF  | PROVAL:  |                                    |            |                                      |                    | /            |
| •                                       | •              |                       | Ţ               | 1        | Approved by                                | y the  |                                    |            |                                      | CEIV               | ED           |
|   |                |                       |                 | . '      | <b>Utah Divisio</b>                        |  |                                    |            |                                      |                    |              |
|   |                |                       |                 |          |  |  | ,                                  |            | NU                                   | V 2 2 2            | 006          |
|   |                |                       |                 | -        | <b>II, Gas a</b> nd I                      | um in ið   | 1                                  |            |                                      | _                  |              |

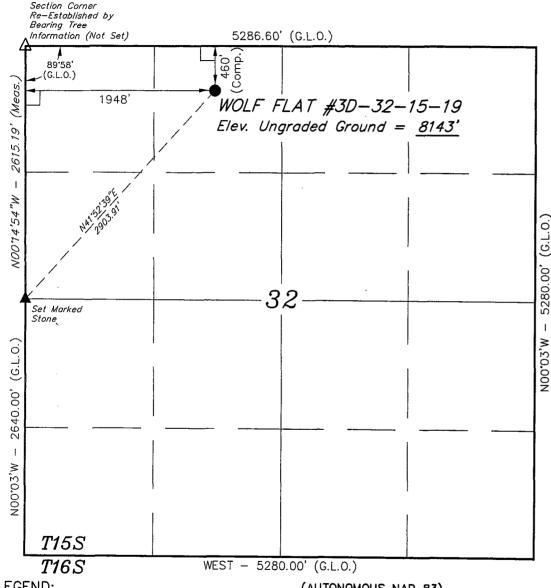
Federal Approval of this Action is Necessary

12-14-0(a)

DIV. OF OIL, GAS & MINING

CONFIDENTIAL CONFIDENTIAL

# T15S, R19E, S.L.B.&M.



#### LEGEND:

= 90° SYMBOL

= PROPOSED WELL HEAD.

= SECTION CORNERS LOCATED.

(AUTONOMOUS NAD 83) LATITUDE =  $39^{\circ}28'29.83''$  (39.474953) LONGITUDE = 109'48'57.00'' (109.815833) (AUTONOMOUS NAD 27) LATITUDE = 39.28'29.70'' (39.474917) LONGITUDE = 109'48'59.50" (109.816528)

= SECTION CORNERS RE-ESTABLISHED. (Not Set On Ground)

#### QUESTAR EXPLR. & PROD.

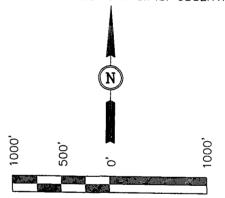
Well location, WOLF FLAT #3D-32-15-19. located as shown in the NE 1/4 NW 1/4 of . Section 32, T15S, R19E, S.L.B.&M., Uintah County, Utah.

#### BASIS OF ELEVATION

SPOT ELEVATION AT A ROAD INTERSECTION IN THE NW 1/4 OF SECTION 19, T15S, R19E, S.L.B.&M. TAKEN FROM THE WOLF FLAT, QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 8054 FEET.

#### BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



#### SCALE CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE THE FIELD NOTES OF ACTUAL SURVEYS THE SUPERVISION AND THAT THE SAME BEST OF MY KNOWLEDGE AND



#### ND SURVEYING UINTAH ENGINEERING 85 SOUTH 200 EAST VERNAL, UTAH 84078

(435) 780-1017

| (+00) 103-1017         |                            |                         |  |  |  |  |
|------------------------|----------------------------|-------------------------|--|--|--|--|
| SCALE<br>1" = 1000'    | DATE SURVEYED:<br>10-11-06 | DATE DRAWN:<br>10-12-06 |  |  |  |  |
| PARTY<br>B.H. F.Y. K.( | REFERENCES<br>G.L.O. PLA   | Γ                       |  |  |  |  |
| WEATHER<br>WARM        | FILE<br>QUESTAR EXPI       | LR. & PROD.             |  |  |  |  |

#### **Additional Operator Remarks**

Questar Explor. & Prod., Co. proposes to drill a well to 11950' to test the Mancos. If productive, casing will be run and the well completed. If dry, the well will be plugged and abandoned as per BLM and State of Utah requirements

See Onshore Order No. 1 attached

Please be advised that Questar Explor. & Prod., Co. agrees to be responsible under the terms and conditions of the lease for the operations conducted upon the lease lands.

Bond coverage for this well is provided by Bond No.965003033. The principal is Questar Explor. & Prod., Co. via surety as consent as provided for the 43 CFR 3104.2.

# ONSHORE OIL & GAS ORDER NO. 1 Approval of Operations on Onshore Federal Oil and Gas Leases

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas No. 1, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

#### 1. <u>Formation Tops</u>

The estimated tops of important geologic markers are as follows:

| Formation   | TVD   | MD      | Prod. Phase Anticipated |
|-------------|-------|---------|-------------------------|
| Green River |       | Surface |                         |
| Wasatch     | 3750  | 3750    | Gas                     |
| Mesaverde   | 5550  | 5550    |                         |
| Sego        | 7630  | 7630    |                         |
| Castlegate  | 7790  | 7790    |                         |
| Blackhawk   | 8050  | 8050    |                         |
| Mancos      | 8520  | 8520    |                         |
| Dakota Silt | 11860 | 11860   | Gas                     |
| TD          | 11950 | 11950   |                         |

#### 2. Anticipated Depths of Oil Gas Water and Other Mineral Bearing Zones

The estimated depths at which the top and bottom of the anticipated water, oil, gas. Or other mineral bearing formations are expected to be encountered are as follows:

| Substance | Formation | Depth |
|-----------|-----------|-------|
| Oil/Gas   | Mancos    | 8520' |

All fresh water and prospectively valuable minerals encountered during drilling, will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

All water shows and water-bearing sands will be reported to the BLM in Vernal, Utah. Copies of State of Utah form OGC-8-X are acceptable. If no flows are detected, samples will be submitted to the BLM along with any water analyses conducted. Fresh water will be obtained from Willow Creek water right #49-2183 / Permit# T75500.

All waste water resulting from drilling operations will be disposed of at RNI disposal pit located in NWNE Section 5, T9S, R22E.

#### 3. Operator's Specification for Pressure Control Equipment:

- A. 5,000 psi W.P. Double Gate BOP or Single Gate BOP (schematic attached)
- B. Functional test daily
- C. All casing strings shall be pressure tested (0.2 psi/foot or 1500 psi, whichever is greater) prior to drilling the plug after cementing; test pressure shall not exceed the internal yield pressure of the casing.
- D. Ram type preventers and associated equipment shall be tested to approved stack working pressure if isolated by test plug or to 50 percent of internal yield pressure of casing whichever is less. BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc..., for a 5M system and individual components shall be operable as designed.

#### 4. Casing Program

|              | <u>Depth</u> | Hole Size | Csg Size | <u>Type</u> | Weight         |
|--------------|--------------|-----------|----------|-------------|----------------|
| Surface      | 500'         | 12-1/4"   | 9 5/8"   | J-55        | 36lb/ft (new)  |
| Intermediate | 5550'        | 8 3/4"    | 7"       | HCP-110     | 26lb/ft (new)  |
| Production   | TD           | 6 1/8"    | 4 ½"     | P-110       | 13.5lb/ft(new) |

#### 5. <u>Auxiliary Equipment</u>

- A. Kelly Cock yes
- B. Float at the bit Yes
- C. Monitoring equipment on the mud system visually
- D. Full opening safety valve on the rig floor yes
- E. Rotating Head yes
  If drilling with air the following will be used:

- F. The blooie line shall be at least 6" in diameter and extend at least 100' from the well bore into the reserve/blooie pit.
- G. Blooie line ignition shall be provided by a continuous pilot (ignited when drilling below 500').
- H. Compressor shall be tied directly to the blooie line through a manifold.
- I. A mister with a continuous stream of water shall be installed near the end of the blooie lines for dust suppression.
- 6. Surface hole and intermediate holewill be drilled with air, air/mist, foam, aerated water or mud depending on hole conditions. Drilling below intermediate casing will be with water based drilling fluids consisting primarily of fresh water, bentonite, lignite, caustic, lime, soda ash and polymers. No chromates will be used. It is not intended to use oil in the mud, however, in the event it is used, oil concentration will be less than 4% by volume. Maximum anticipated mud weight is 9.5 ppg.

No minimum quantity of weight material will be required to be kept on location.

PVT/Flow Show will be used from base of surface casing to TD.

Gas detector will be used from surface casing depth to TD.

- 6. Testing, logging and coring program
  - A. Cores none anticipated
  - B. DST none anticipated

Logging – Mud logging – 500 to TD GR-SP-Induction Neutron Density

C. Formation and Completion Interval: Pre-Cambrian interval, final determination 0f completion will be made by analysis of logs.
 Stimulation – Stimulation will be designed for the particular area of interest as encountered.

#### 7. <u>Cementing Program</u>

See attached Cementing Recommendation.

\*Final cement volumes to be calculated from caliper log with an attempt to be made to circulate cement to the surface. A bond log will be run across the zone of interest and across zones as required by the authorized officer to insure protection of natural resources.

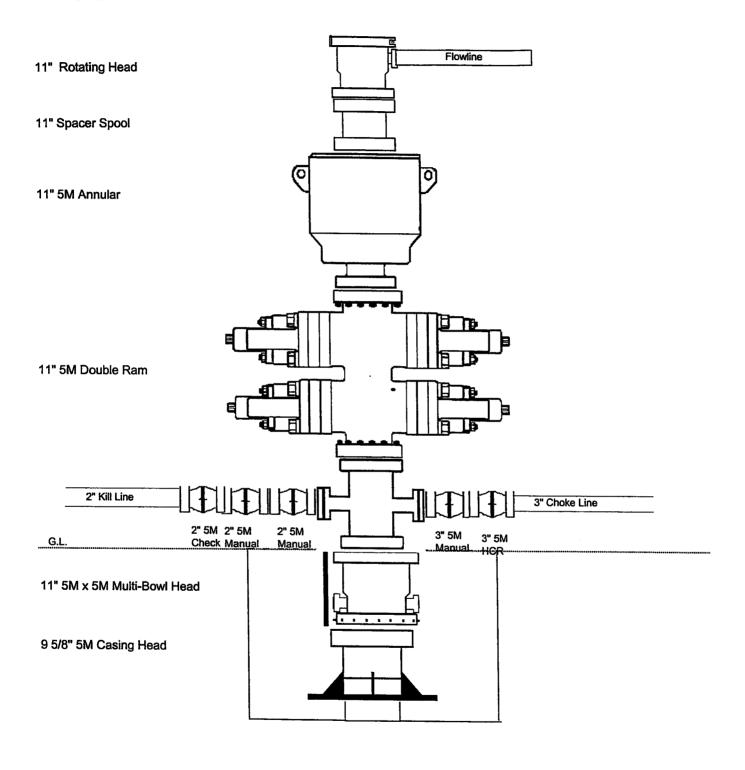
#### 8. Anticipated Abnormal Pressures and Temperatures, Other Potential Hazards

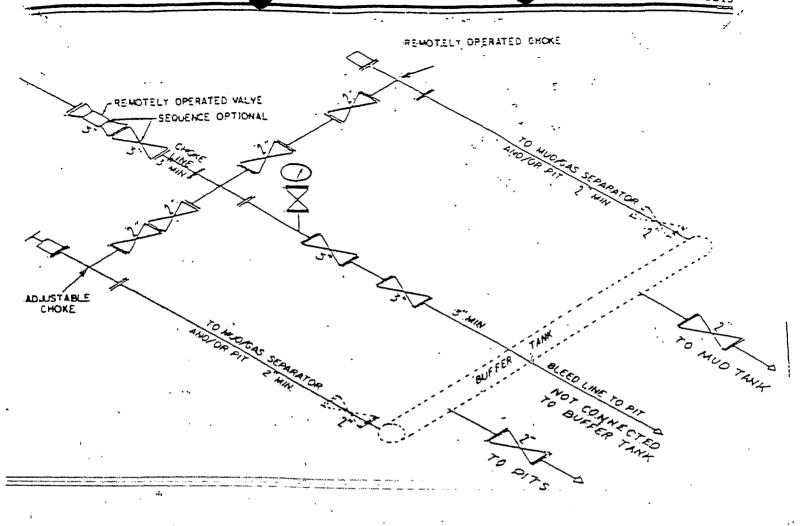
No abnormal temperatures or pressures are anticipated. No H2S has been encountered in or known to exist from previous wells drilled to similar depths in the general area. Maximum anticipated bottom hole pressure equals approximately 6100 psi. Maximum anticipated bottom hole temperature is 140° F.

#### 9. Surface Owner

The well pad and access road are located on lands owned by the Ute Tribe.

#### 5M BOP STACK





5M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES MAY VARY

[FR Doc. 88-28738 Filed 11-17-88; 2:45 am]



9-5/8" 36# J-55 CSA 500'

7" 26# P-110 CSA 5,000'

4-1/2" 13.5 # P-110 CSA 11,950'

#### **HALLIBURTON**

Questar Exploration And Production, Co. 1050 17th St. Suite 500 Denver, Colorado 80265

WF 3D-32-15-19 Flat Rock Field Uintah County, Utah United States of America

# Multiple String Cement Recommendation

Prepared for: Mr. Jim Davidson

November 20, 2006

Version: 2

Submitted by:
Aaron James
Halliburton Energy Services
Denver 410 17th Co Us
410 Seventeenth St
Denver, Colorado 80202
303.899.4700

**HALLIBURTON** 



# Halliburton appreciates the opportunity to present this proposal and looks forward to being of service to you.

#### **Foreword**

Enclosed is our recommended procedure for cementing the casing strings in the referenced well. The information in this proposal includes well data, calculations, materials requirements, and cost estimates. This proposal is based on information from our field personnel and previous cementing services in the area.

Halliburton Energy Services recognizes the importance of meeting society's needs for health, safety, and protection of the environment. It is our intention to proactively work with employees, customers, the public, governments, and others to use natural resources in an environmentally sound manner while protecting the health, safety, and environmental processes while supplying high quality products and services to our customers.

We appreciate the opportunity to present this proposal for your consideration and we look forward to being of service to you. Our Services for your well will be coordinated through the Service Center listed below. If you require any additional information or additional designs, please feel free to contact myself or our field representative listed below.

| Prepared by:  |                   |
|---------------|-------------------|
|               | Ginette Ishida    |
|               | Procedure Analyst |
| Submitted by: |                   |
|               | Aaron James       |
|               | Technical Advisor |

SERVICE CENTER:
SERVICE COORDINATOR:
FIELD SERVICE QUALITY COORDINATOR:
SENIOR TECHNICAL PROFESSIONAL:
TECHNICAL PROFESSIONALS-FIELD:
FIELD REPRESENTATIVE:
PHONE NUMBER:

Vernal. UT Willis Lefevre Lex Cook Richard Curtice Kyle Scott Robert Kruger 1-435-789-2550



#### **Cementing Best Practices**

- 1. Cement quality and weight: You must choose a cement slurry that is designed to solve the problems specific to each casing string.
- 2. Waiting time: You must hold the cement slurry in place and under pressure until it reaches its' initial set without disturbing it. A cement slurry is a time-dependent liquid and must be allowed to undergo a hydration reaction to produce a competent cement sheath. A fresh cement slurry can be worked (thickening or pump time) as long as it is in a plastic state and before going through its' transition phase. If the cement slurry is not allowed to transition without being disturbed, it may be subjected to changes in density, dilution, settling, water separation, and gas cutting that may lead to a lack of zonal isolation and possible bridging in the annulus.
- 3. Pipe movement: Pipe movement may be one of the single most influential factors in mud removal. Reciprocation and/or rotation mechanically breaks up gelled mud and changes the flow patterns in the annulus to improve displacement efficiency.
- 4. Mud properties (for cementing):

#### Rheology:

Plastic Viscosity (PV) < 15 centipoise (cp)

Yield Point (YP) < 10 lb/100 ft2

These properties should be reviewed with the Mud Engineer, Drilling Engineer, and Company Representative(s) to ensure no hole problems are created.

#### Gel Strength:

The 10-second/10-minute gel strength values should be such that the 10-second and 10-minute readings are close together or flat (i.e., 5/6). The 30-minute reading should be less than 20 lb/100 ft². Sufficient shear stress may not be achieved on a primary cement job to remove mud left in the hole if the mud were to develop more than 25 lb/100 ft² of gel strength.

#### Fluid Loss:

Decreasing the filtrate loss into a permeable zone enhances the creation of a thin, competent filter cake. A thin, competent filter cake created by a low fluid loss mud system is desirable over a thick, partially gelled filter cake. A mud system created with a low fluid loss will be more easily displaced. The fluid loss value should be < 15 cc's (ideal would be 5 cc's).

- 5. Circulation: Prior to cementing circulate full hole volume twice, or until well conditioned mud is being returned to the surface. There should be no cutting in the mud returns. An annular velocity of 260 feet per minute is optimum (SPE/IADC 18617), if possible.
- 6. Flow rate: Turbulent flow is the most desirable flow regime for mud removal. If turbulence cannot be achieved pump at as high a flow rate that can practically and safely be used to create the maximum flow energy. The highest mud removal is achieved when the maximum flow energy is obtained.
- 7. Pipe Centralization: The Cement will take the path of least resistance, therefore proper centralization is important to help prevent the casing from contacting the borehole wall. A minimum standoff of 70% should be targeted for optimum displacement efficiency.
- 8. Rat hole: A weighted viscous pill placed in the rat hole prior to cementing will minimize the risk of higher density cement mixing with lower density mud when the well is static.
- 9. Top and Bottom plugs: A top and bottom plug are recommended to be run on all primary casing jobs. The bottom plug should be run after the spacer and ahead of the first cement slurry.
- 10. Spacers and flushes: Spacers and/or flushes should be used to prevent contamination between the cement slurry and the drilling fluid. They are also used to clean the wellbore and aid with bonding. To determine the volume, either a minimum of 10 minutes contact time or 1000 ft. of annular fill, whichever is greater, is recommended.



#### Job Information

#### **Cement Surface Casing**

WF 3D-32-15-19

12 1/4" Open Hole Section 0 - 500 ft (MD) 0 - 500 ft (TVD)

Inner Diameter 12.250 in Job Excess 100 %

9 5/8" Surface Casing 0 - 500 ft (MD)

0 - 500 ft (TVD)

Outer Diameter 9.625 in
Inner Diameter 8.921 in
Linear Weight 36 lbm/ft
Casing Grade J-55
Job Excess 0 %

Mud Type Water Based Mud

# **HALLIBURTON**

# **Calculations**

# **Cement Surface Casing**

| Spacer:  | $= 112.29 \text{ ft}^3$  |
|--|--------------------------|
| Total Spacer   |                          |
|  | = 20.00  bbl             |
| Cement: (500.00 ft fill)                                     |                          |
| $500.00 \text{ ft} * 0.3132 \text{ ft}^3/\text{ft} * 100 \%$ | $= 313.19 \text{ ft}^3$  |
| Primary Cement   | $= 313.19 \text{ ft}^3$  |
| ,  | = 55.78  bbl             |
|  |                          |
| Shoe Joint Volume: (42.00 ft fill)                           |                          |
| 42.00 ft * 0.4341 ft <sup>3</sup> /ft                        | $= 18.23 \text{ ft}^3$   |
|  | = 3.25  bbl              |
| Tail plus shoe joint   | $= 331.42 \text{ ft}^3$  |
|  | = 59.03  bbl             |
| Total Tail   | = 184  sks               |
| m . 171  |                          |
| Total Pipe Capacity:   | _                        |
| $500.00 \text{ ft} * 0.4341 \text{ ft}^3/\text{ft}$          | $= 217.03 \text{ ft}^3$  |
|  | = 38.65  bbl             |
| Displacement Volume to Chas Isiate                           |                          |
| Displacement Volume to Shoe Joint:                           |                          |
| Capacity of Pipe - Shoe Joint                                | = 38.65  bbl - 3.25  bbl |
|  | = 35.41  bbl             |



#### Job Recommendation

#### **Cement Surface Casing**

Fluid Instructions

Fluid 1: Water Based Spacer

Gel Water

Fluid Density:

8.34 lbm/gal

Fluid Volume:

20 bbl

Fluid 2: Primary Cement

Rockies LT

0.125 lbm/sk Poly-E-Flake (Cement Material) 0.25 lbm/sk Kwik Seal (Cement Material)

Fluid Weight Slurry Yield:

13.50 lbm/gal

Total Mixing Fluid:

 $1.80 \text{ ft}^3/\text{sk}$ 

Top of Fluid:

9.33 Gal/sk

Calculated Fill:

0 ft500 ft

Volume:

59.03 bbl

Calculated Sacks:

184.12 sks

Proposed Sacks:

190 sks

Fluid 3: Water Spacer

Water Displacement

Fluid Density:

8.34 lbm/gal

Fluid Volume:

69.68 bbl

Fluid 4: Top Out Cement

**Premium Cement** 

94 lbm/sk Premium Cement (Cement) 2 % Calcium Chloride (Accelerator)

Slurry Yield: Total Mixing Fluid: 15.60 lbm/gal  $1.20 \, \text{ft}^3/\text{sk}$ 

Fluid Weight

5.26 Gal/sk

Proposed Sacks:

100 sks



#### Job Procedure

# **Cement Surface Casing**

# **Detailed Pumping Schedule**

| Fluid# | Fluid<br>Type | Fluid Name         | Surface<br>Density<br>lbm/gal | Estimated<br>Avg Rate<br>bbl/min | Downhole<br>Volume |
|--------|---------------|--------------------|-------------------------------|----------------------------------|--------------------|
| 1      | Spacer        | Gel Water          | 8.3                           | 5.0                              | 20 bbl             |
| 2      | Cement        | Rockies LT Cement  | 13.5                          | 5.0                              | 190 sks            |
| 3      | Spacer        | Water Displacement | 8.3                           | 5.0                              | 69.68 bbl          |
| 4      | Cement        | Top Out Cement     | 15.6                          | 1.5                              | 100 sks            |



#### Job Information

## **Cement Intermediate Casing**

WF 3D-32-15-19

| 9 5/8" Surface Casing |
|-----------------------|
|-----------------------|

0 - 500 ft (MD) 0 - 500 ft (TVD)

Outer Diameter 9.625 in
Inner Diameter 8.921 in
Linear Weight 36 lbm/ft
Casing Grade J-55
Job Excess 0 %

8 3/4" Open Hole Section 500 - 5550 ft (MD)

Inner Diameter 8.750 in Job Excess 35 %

7" Internediate Casing 0 - 5550 ft (MD)

Outer Diameter 7.000 in
Inner Diameter 6.276 in
Linear Weight 26 lbm/ft
Casing Grade HCP110
Job Excess 0 %

Mud TypeAeratedMud Weight6 lbm/galBHCT95 degF



#### **Calculations**

#### **Cement Intermediate Casing**

| Spacer: |
|---------|
|---------|

Total Spacer =  $56.15 \text{ ft}^3$ = 10.00 bbl

Spacer:

Total Spacer =  $112.29 \text{ ft}^3$ = 20.00 bbl

Spacer:

Total Spacer =  $56.15 \text{ ft}^3$ = 10.00 bbl

Cement: (5050.00 ft fill)

 $500.00 \text{ ft } * 0.1668 \text{ ft}^3/\text{ft } * 0 \%$  = 83.41 ft<sup>3</sup>  $4550.00 \text{ ft } * 0.1503 \text{ ft}^3/\text{ft } * 35 \%$  = 923.40 ft<sup>3</sup> Total Foamed Lead Cement = 1006.81 ft<sup>3</sup> = 179.32 bbl Sacks of Cement = 514 sks

Cement: (500.00 ft fill)

 $500.00 \text{ ft} * 0.1503 \text{ ft}^3/\text{ft} * 35 \%$  = 101.47 ft<sup>3</sup> Tail Cement = 101.47 ft<sup>3</sup> = 18.07 bbl

Shoe Joint Volume: (42.00 ft fill)

 $42.00 \text{ ft} * 0.2148 \text{ ft}^3/\text{ft} = 9.02 \text{ ft}^3$  = 1.61 bblTail plus shoe joint = 110.50 ft<sup>3</sup> = 19.68 bblTotal Tail = 75 sks

Total Pipe Capacity:

5550.00 ft \* 0.2148 ft<sup>3</sup>/ft = 1192.30 ft<sup>3</sup> = 212.36 bbl

Displacement Volume to Shoe Joint:

Capacity of Pipe - Shoe Joint = 212.36 bbl - 1.61 bbl

= 210.75 bbl



#### Job Recommendation

# **Cement Intermediate Casing**

| Fluid Instructions Fluid 1: Water Spacer  |   |   |
|---|---|---|
| Fresh Water Ahead   | Fluid Density: Fluid Volume:  | 8.34 lbm/gal<br>10 bbl  |
| Fluid 2: Reactive Spacer<br>Super Flush   | Fluid Density:<br>Fluid Volume:   | 9.20 lbm/gal<br>20 bbl  |
| Fluid 3: Water Spacer<br>Fresh Water Behind   | Fluid Density:<br>Fluid Volume:   | 8.34 lbm/gal<br>10 bbl  |
| Fluid 4: Foamed Lead Cement 50/50 Poz Premium 0.1 % FDP-C766-05 (Low Fluid Loss Control) 5 lbm/sk Silicalite Compacted (Light Weight Additive) 20 % SSA-1 (Cement Material) 0.1 % Versaset (Thixotropic Additive) 1.5 % Zonesealant 2000 (Foamer) | Foamed Fluid Weight Fluid Weight Slurry Yield: Total Mixing Fluid: Top of Fluid: Calculated Fill: Volume: Calculated Sacks: Proposed Sacks:   | 11.00 lbm/gal<br>14.30 lbm/gal<br>1.47 ft <sup>3</sup> /sk<br>6.41 Gal/sk<br>0 ft<br>5050 ft<br>179.32 bbl<br>513.67 sks<br>520 sks |
| Fluid 5: Tail Cement 50/50 Poz Premium 0.1 % FDP-C766-05 (Low Fluid Loss Control) 5 lbm/sk Silicalite Compacted (Light Weight Additive 20 % SSA-1 (Cement Material) 0.1 % Versaset (Thixotropic Additive)   | Fluid Weight Slurry Yield: ) Total Mixing Fluid:     Top of Fluid:     Calculated Fill:     Volume:     Calculated Sacks:     Proposed Sacks: | 14.30 lbm/gal<br>1.47 ft³/sk<br>6.41 Gal/sk<br>5050 ft<br>500 ft<br>19.68 bbl<br>75.17 sks<br>80 sks                                |
| Fluid 6: Water Spacer Displacement  | Fluid Density:<br>Fluid Volume:   | 8.34 lbm/gal<br>340.78 bbl  |
| Fluid 7: Top Out Cement Premium Cement  94 lbm/sk Premium Cement (Cement)  12 % Cal-Seal 60 (Accelerator)  3 % Calcium Chloride (Accelerator)   | Fluid Weight<br>Slurry Yield:<br>Total Mixing Fluid:<br>Proposed Sacks:   | 14.60 lbm/gal<br>1.55 ft <sup>3</sup> /sk<br>7.35 Gal/sk<br>75 sks  |



#### Job Procedure

## **Cement Intermediate Casing**

#### **Detailed Pumping Schedule**

| Fluid # | Fluid<br>Type | Fluid Name         | Surface<br>Density<br>Ibm/gal | Estimated Avg Rate bbl/min | Downhole<br>Volume |
|---------|---------------|--------------------|-------------------------------|----------------------------|--------------------|
| 1       | Spacer        | Fresh Water Ahead  | 8.3                           | 5.0                        | 10 bbl             |
| 2       | Spacer        | Super Flush        | 9.2                           | 5.0                        | 20 bbl             |
| 3       | Spacer        | Fresh Water Behind | 8.3                           | 5.0                        | 10 bbl             |
| 4       | Cement        | Foamed Lead        | 14.3                          | 5.0                        | 520 sks            |
| 5       | Cement        | Unfoamed Tail      | 14.3                          | 5.0                        | 80 sks             |
| 6       | Spacer        | Displacement       | 8.3                           | 7.0                        | 340.78 bbl         |
| 7       | Cement        | 12/3/ Thixo        | 14.6                          | 1.5                        | 75 sks             |

#### Foam Output Parameter Summary:

| Fluid # | Fluid Name  | Unfoamed Liquid Volume | Beginning<br>Density<br>lbm/gal | Ending<br>Density<br>lbm/gal | Beginning<br>Rate<br>scf/bbl | Ending<br>Rate<br>scf/bbl |
|---------|-------------|------------------------|---------------------------------|------------------------------|------------------------------|---------------------------|
| Stage 1 |             |                        |                                 |                              | 1                            |                           |
| 4       | Foamed Lead | 134.49bbl              | 11.0                            | 11.0                         | 30.2                         | 388.4                     |

### **Foam Design Specifications:**

Foam Calculation Method: Constant Density

Backpressure: 250 psig

Bottom Hole Circulating Temp: 95 degF

Mud Outlet Temperature: 80 degF

Calculated Gas = 28139.9 scf

Additional Gas = 40000 scf

Total Gas = 68139.9 scf



#### Job Information

#### **Cement Production Casing**

WF 3D-32-15-19

7" Internediate Casing 0 - 5550 ft (MD)

Outer Diameter 7.000 in
Inner Diameter 6.276 in
Linear Weight 26 lbm/ft
Casing Grade HCP110
Job Excess 0 %

6 1/8" Open Hole Section 5550 - 11950 ft (MD)

Inner Diameter 6.125 in Job Excess 35 %

4 1/2" Production Casing 0 - 11950 ft (MD)

Outer Diameter 4.500 in
Inner Diameter 3.920 in
Linear Weight 13.50 lbm/ft
Casing Grade P-110
Job Excess 0 %

Mud TypeWater Based MudMud Weight9.20 lbm/galBHST230 degF

BHCT 180 degF



#### **Calculations**

# **Cement Production Casing**

| Spacer:                                       | = $56.16 \text{ ft}^3$  |
|---|-------------------------|
| 538.00 ft * 0.1044 ft <sup>3</sup> /ft * 0 %  | = $56.15 \text{ ft}^3$  |
| Total Spacer                                  | = $10.00 \text{ bbl}$   |
| Spacer:                                       | = $112.32 \text{ ft}^3$ |
| 1076.00 ft * 0.1044 ft <sup>3</sup> /ft * 0 % | = $112.29 \text{ ft}^3$ |
| Total Spacer                                  | = $20.00 \text{ bbl}$   |
| Spacer:                                       | = $56.16 \text{ ft}^3$  |
| 538.00 ft * 0.1044 ft <sup>3</sup> /ft * 0 %  | = $56.15 \text{ ft}^3$  |
| Total Spacer                                  | = $10.00 \text{ bbl}$   |
| Cement: (6450.00 ft fill)                     |                         |

| Cement : (0450.00 it iii)                      |                         |
|--|-------------------------|
| 550.00 ft * 0.1044 ft <sup>3</sup> /ft * 0 %   | $= 57.41 \text{ ft}^3$  |
| 5900.00 ft * 0.0942 ft <sup>3</sup> /ft * 35 % | $= 750.06 \text{ ft}^3$ |
| Total Foamed Lead Cement                       | $= 807.47 \text{ ft}^3$ |
|  | = 143.82  bbl           |
| Sacks of Cement                                | = 399  sks              |

| Cement: (500.00 ft fill)                                    |                        |
|---|------------------------|
| $500.00 \text{ ft} * 0.0942 \text{ ft}^3/\text{ft} * 35 \%$ | $= 63.56 \text{ ft}^3$ |
| Tail Cement   | $= 63.56 \text{ ft}^3$ |
|   | = 11.32  bbl           |

| Shoe Joint Volume: (42.00 ft fill)                 |                        |
|--|------------------------|
| $42.00 \text{ ft} * 0.0838 \text{ ft}^3/\text{ft}$ | $= 3.52 \text{ ft}^3$  |
|  | = 0.63  bbl            |
| Tail plus shoe joint                               | $= 67.08 \text{ ft}^3$ |
|  | = 11.95  bbl           |
| Total Tail   | - 45 alan              |

| Total Tail   | = 45  sks                     |
|--|-------------------------------|
| Total Pipe Capacity:<br>11950.00 ft * 0.0838 ft <sup>3</sup> /ft | = 1001.54  ft $= 178.38  bbl$ |
|  |                               |

| Displacement Volume to Shoe Joint: |                           |
|------------------------------------|---------------------------|
| Capacity of Pipe - Shoe Joint      | = 178.38  bbl - 0.63  bbl |
|                                    | = 177.75  bbl             |



#### Job Recommendation

# **Cement Production Casing**

| Fluid Instructions Fluid 1: Water Spacer Fresh Water Ahead  | Fluid Density:<br>Fluid Volume:   | 8.34 lbm/gal<br>10 bbl  |
|---|---|---|
| Fluid 2: Reactive Spacer<br>Super Flush   | Fluid Density:<br>Fluid Volume:   | 9.20 lbm/gal<br>20 bbl  |
| Fluid 3: Water Spacer<br>Fresh Water Behind   | Fluid Density:<br>Fluid Volume:   | 8.34 lbm/gal<br>10 bbl  |
| Fluid 4: Foamed Lead Cement 50/50 Poz Premium 0.3 % FDP-C766-05 (Low Fluid Loss Control) 5 lbm/sk Silicalite Compacted (Light Weight Additive) 20 % SSA-1 (Cement Material) 0.2 % Versaset (Thixotropic Additive) 1.5 % Zonesealant 2000 (Foamer) | Fluid Weight Slurry Yield: Total Mixing Fluid: Top of Fluid: Calculated Fill: Volume: Calculated Sacks: Proposed Sacks: | 14.30 lbm/gal<br>1.48 ft <sup>3</sup> /sk<br>6.44 Gal/sk<br>5000 ft<br>6450 ft<br>143.82 bbl<br>398.78 sks<br>400 sks |
| Fluid 5: Tail Cement 50/50 Poz Premium 0.3 % FDP-C766-05 (Low Fluid Loss Control) 5 lbm/sk Silicalite Compacted (Light Weight Additive) 20 % SSA-1 (Cement Material) 0.2 % Versaset (Thixotropic Additive)  | Fluid Weight Slurry Yield: Total Mixing Fluid: Top of Fluid: Calculated Fill: Volume: Calculated Sacks: Proposed Sacks: | 14.30 lbm/gal<br>1.48 ft <sup>3</sup> /sk<br>6.44 Gal/sk<br>11450 ft<br>500 ft<br>11.95 bbl<br>45.48 sks<br>50 sks    |
| Fluid 6: Water Spacer Displacement  | Fluid Density:  | 8.34 lbm/gal  |

296.06 bbl

Fluid Volume:



#### Job Procedure

#### **Cement Production Casing**

#### **Detailed Pumping Schedule**

| Fluid# | Fluid<br>Type | Fluid Name         | Surface<br>Density<br>Ibm/gal | Estimated Avg Rate bbl/min | Downhole<br>Volume |
|--------|---------------|--------------------|-------------------------------|----------------------------|--------------------|
| 1      | Spacer        | Fresh Water Ahead  | 8.3                           | 5.0                        | 10 bbl             |
| 2      | Spacer        | Super Flush        | 9.2                           | 5.0                        | 20 bbl             |
| 3      | Spacer        | Fresh Water Behind | 8.3                           | 5.0                        | 10 bbl             |
| 4      | Cement        | Foamed Lead        | 14.3                          | 5.0                        | 400 sks            |
| 5      | Cement        | Unfoamed Tail      | 14.3                          | 5.0                        | 50 sks             |
| 6      | Spacer        | Displacement       | 8.3                           | 7.0                        | 296.06 bbl         |

#### Foam Output Parameter Summary:

| Fluid#  | Fluid Name  | Unfoame<br>d Liquid<br>Volume | Beginning<br>Density<br>Ibm/gal | Ending<br>Density<br>lbm/gal | Beginning<br>Rate<br>scf/bbl | Ending<br>Rate<br>scf/bbl |
|---------|-------------|-------------------------------|---------------------------------|------------------------------|------------------------------|---------------------------|
| Stage 1 |             |                               |                                 |                              |                              |                           |
| 4       | Foamed Lead | 104.76bb<br>1                 | 11.0                            | 11.0                         | 265.5                        | 630.5                     |

#### Foam Design Specifications:

Foam Calculation Method: Constant Density

Backpressure: 75 psig

Bottom Hole Circulating Temp: 180 degF Mud Outlet Temperature: 120 degF Calculated Gas = 47830.3 scf Additional Gas = 40000 scf

Total Gas = 87830.3 scf

#### Lessee's or Operator's Representative:

Jan Nelson Red Wash Rep. Questar Explor. & Prod. Co 11002 East 17500 South Vernal, Utah 84078 (435) 781-4331

#### Certification:

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil & Gas Orders, the approved plan of operations, and any applicable Notice to Lessees.

Questar Explor. & Prod. Co. will be fully responsible for the actions of their subcontractors.

A complete copy of the approved Application for Permit to Drill will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Questar Explor. & Prod. Co. its' contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Jan Nelson

Red Wash Representative

17-Nov-06

Date

# QUESTAR EXPLR. & PROD. WOLF FLAT #3D-32-15-19 LOCATED IN UINTAH COUNTY, UTAH

SECTION 32, T15S, R19E, S.L.B.&M.



PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

**CAMERA ANGLE: NORTHEASTERLY** 



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: SOUTHEASTERLY

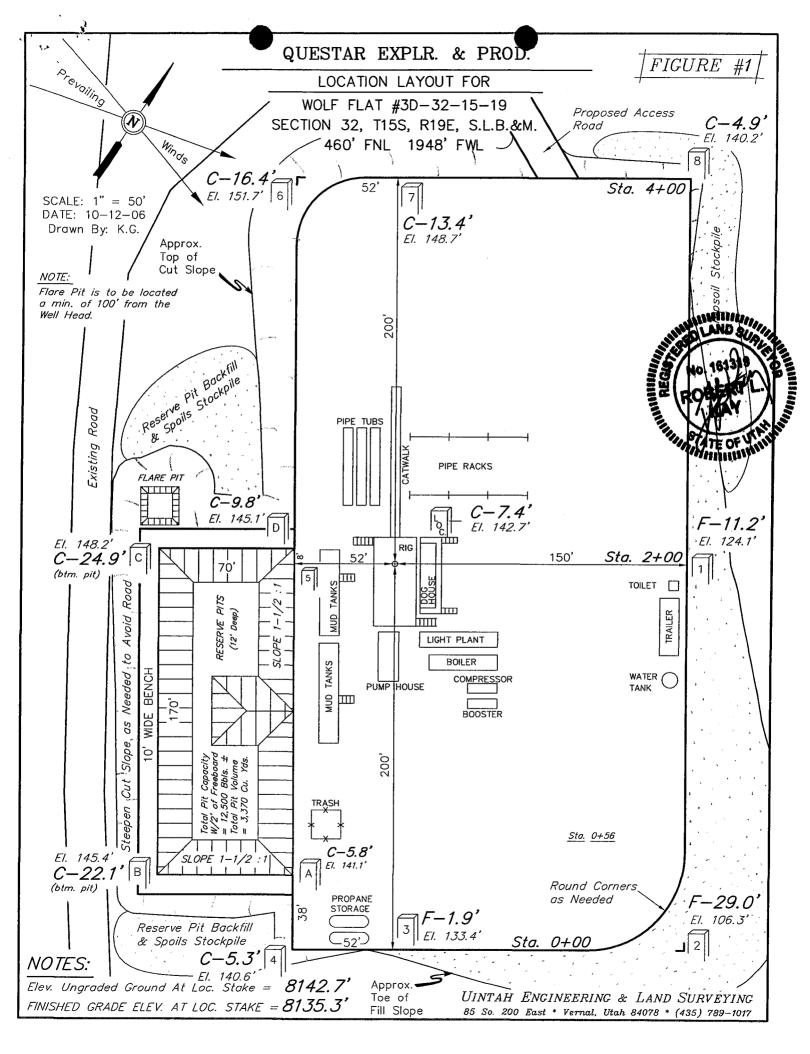


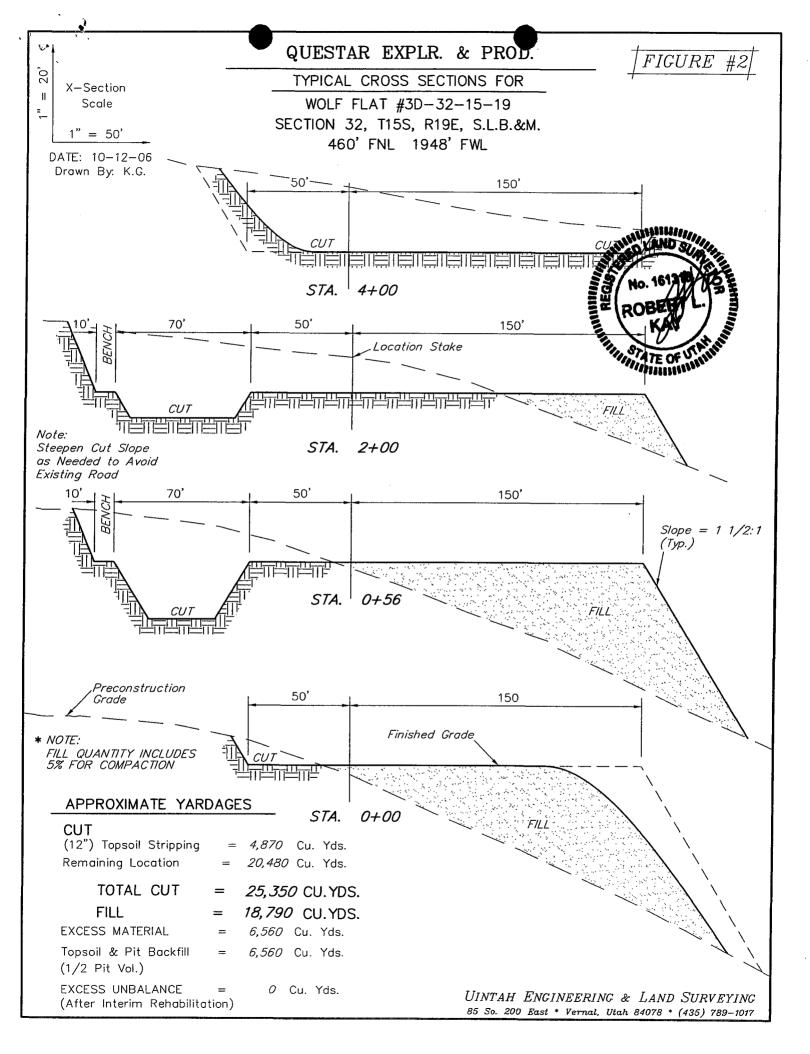
Uintah Engineering & Land Surveying S South 200 East Vernal, Utah 84078 435-789-1017 Vernal, Utah 84078 uels@uelsinc.com

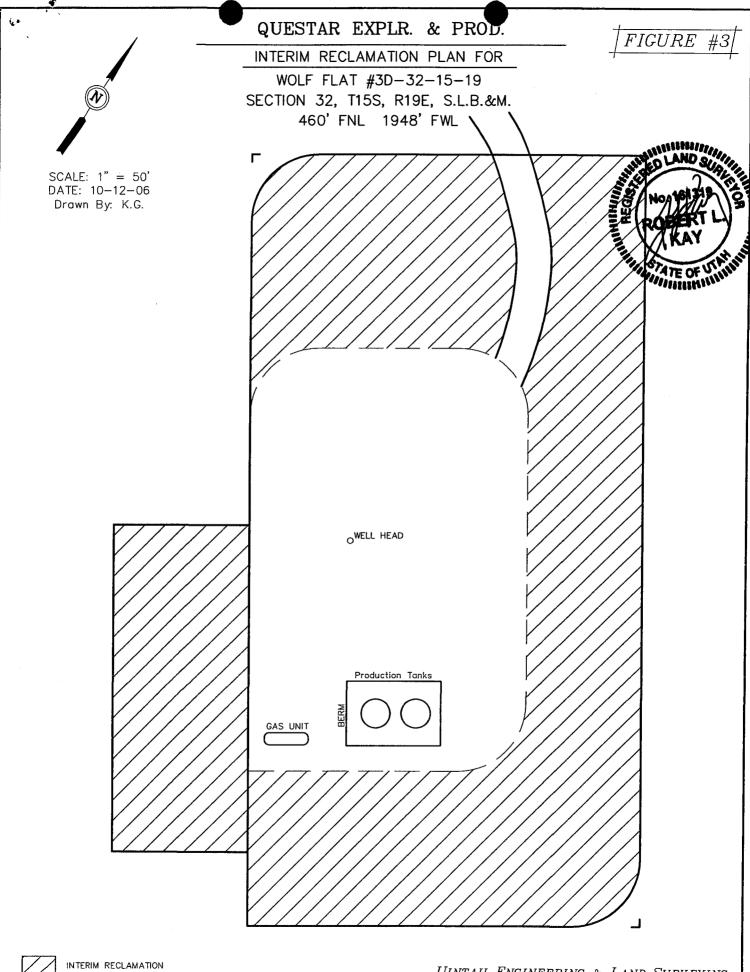
**LOCATION PHOTOS** 

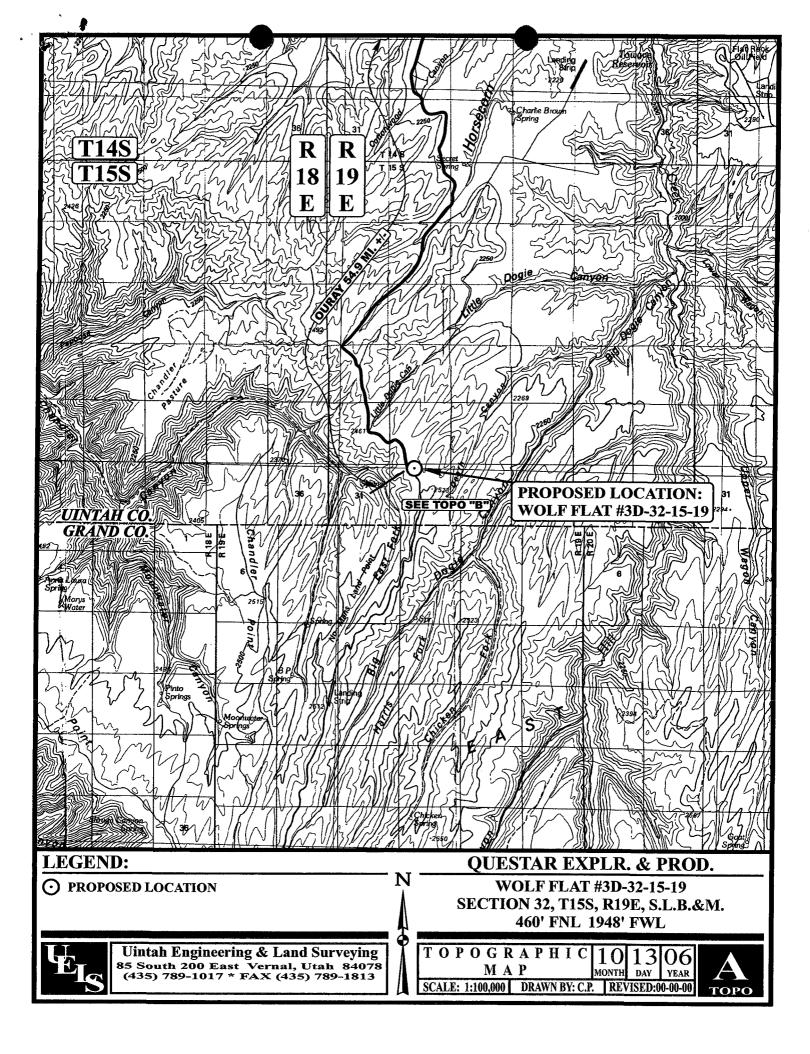
РНОТО

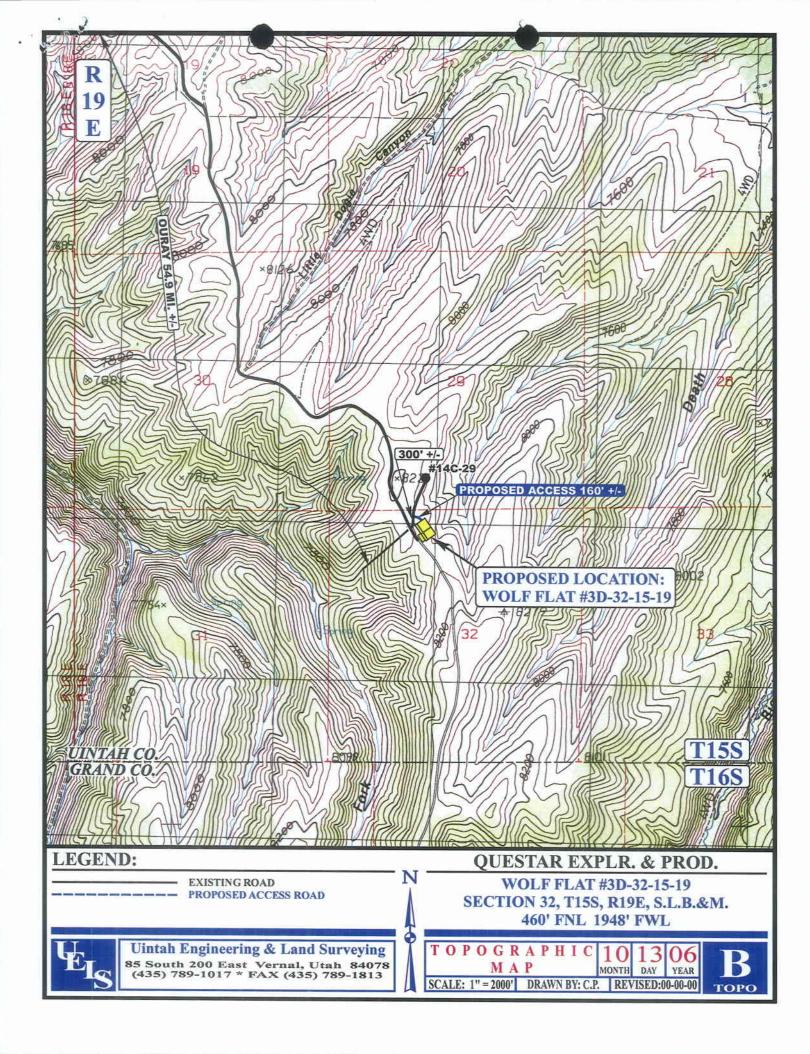
TAKEN BY: B.H. | DRAWN BY: C.P. | REVISED:00-00-00

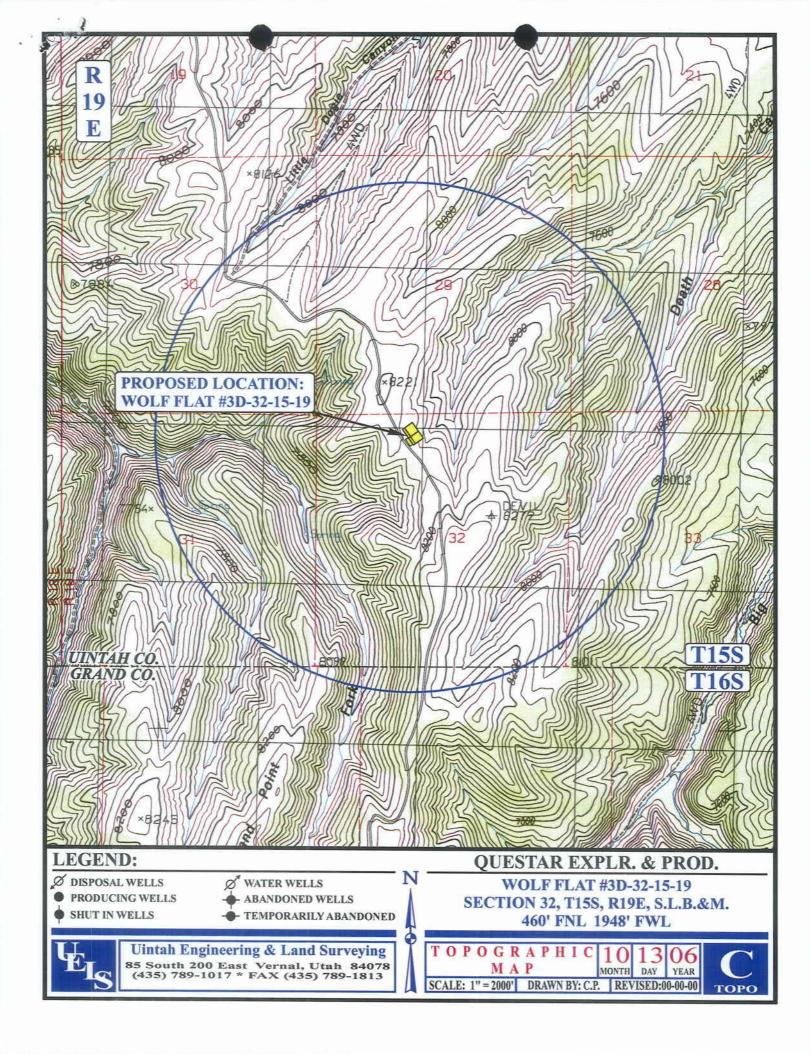


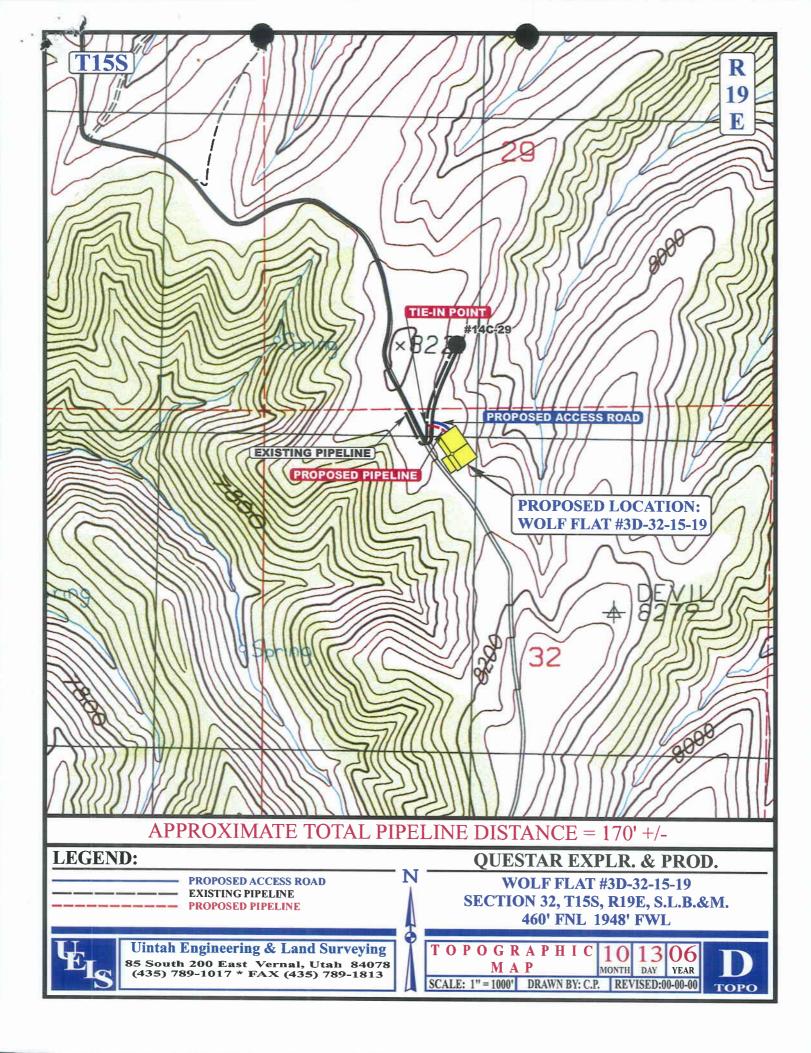




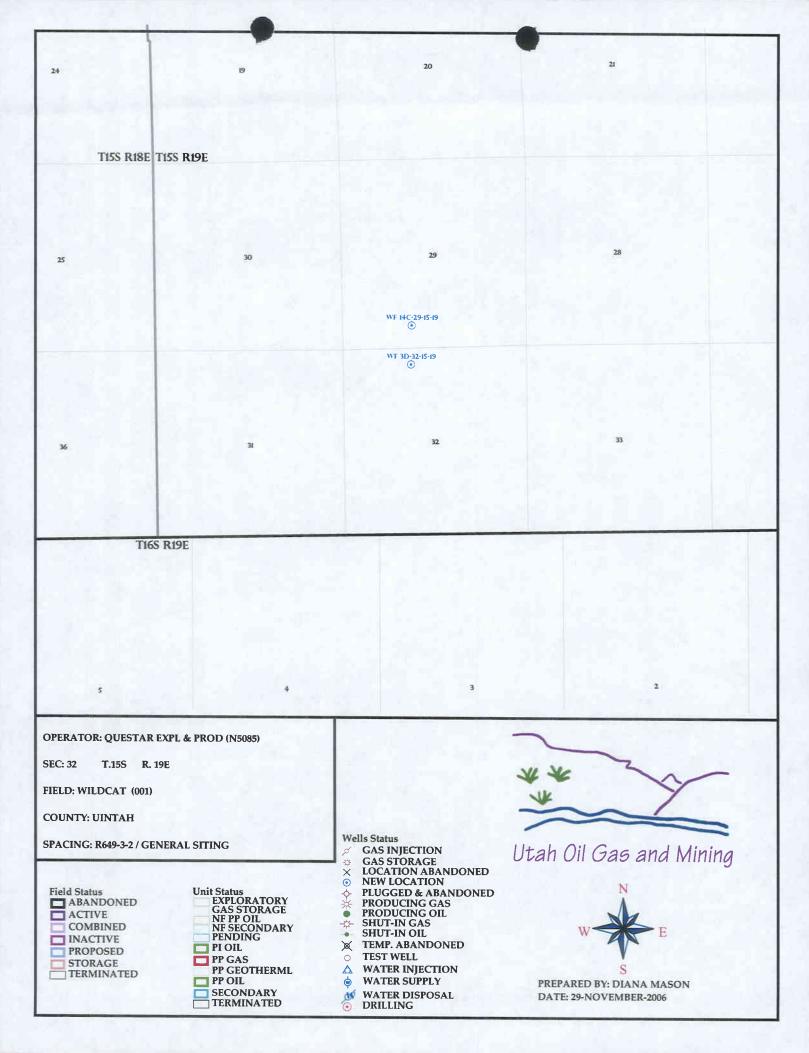








| APD RECEIVED: 11/   | /22/2006                    |  | API NO. ASSIG                | NED: 43-04  | :7-38877       |
|---|-----------------------------|--|------------------------------|-------------|----------------|
| WELL NAME: WF 3D-   | 32-15-19                    |  |                              |             |                |
| OPERATOR: QUESTA  | AR EXPLORATION & ( N5085 )  |  | PHONE NUMBER:                | 435-781-43  | 31             |
| CONTACT: JAN NE   | ELSON                       |  |                              |             |                |
| PROPOSED LOCATION:  |                             |  | INSPECT LOCATN               | BY: /       | /              |
| NENW 32<br>SURFACE: 0460 F  | 150S 190E<br>NL 1948 FWI.   |  | Tech Review                  | Initials    | Date           |
| BOTTOM: 0460 F  | NL 1948 FWL                 |  | Engineering                  | DRO         | 12/13/06       |
| COUNTY: UINTAH LATITUDE: 39.474                                     | 96 LONGITUDE: -109.8150     |  | Geology                      |             |                |
|   | S: 601924 NORTHINGS: 43699  | 47   | Surface                      |             |                |
| FIELD NAME: WILL  LEASE TYPE: 3  LEASE NUMBER: MI  SURFACE OWNER: 2 | - State<br>G-47974          |  | PROPOSED FORMAT              |             |                |
| RECEIVED AND/OR RE  | EVIEWED:                    | LOCATI   | ON AND SITING:               |             |                |
| _ <b>✓</b> Plat   |                             | R  | 649-2-3.                     |             |                |
| Bond: Fed[]   | Ind[] Sta[] Fee[]           | Unit:  |                              |             |                |
| (No. 965003   |                             |  |                              |             |                |
| Potash (Y/N   | ·                           | <del></del>  | 649-3-2. Gener               |             | Datasaan Walla |
| Water Permit  | 90-5 (B) or 190-3 or 190-13 | Siting: 460 From Qtr/Qtr & 920' Between Wells  R649-3-3. Exception |                              |             |                |
| (No. 49-218:  | II.                         | K  | 049-3-3. касер               | CIOII       |                |
| RDCC Review   |                             |  | rilling Unit                 |             |                |
| (Date: 12/1   | 1472006 )                   |  | Board Cause No:<br>Eff Date: |             |                |
| <u></u>   | reement (Y/N)               |  | Siting:                      |             |                |
| NIA Intent to Co  | ommingle (Y/N)              | R  | 649-3-11. Dire               | ctional Dri | 111            |
| COMMENTS:   |                             |  |                              |             |                |
| STIPULATIONS:   | 1- Ledy appropr             |  |                              |             |                |
|   | 2- Spannestia               | C 1 61   |                              |             |                |
| •                             | 3- Coment 5+, p #3 (        | 4/2 pro  | duction, 5000',              | u0)         |                |
|   | 4- STATEMER                 |  | ( T )                        |             |                |



# **Application for Permit to Drill**

#### **Statement of Basis**

12/14/2006

#### Utah Division of Oil, Gas and Mining

Page 1

APD No

API WellNo

Status

Well Type

**Surf Ownr** 

**CBM** 

189

43-047-38877-00-00

GW

T

No

Well Name WF 3D-32-15-19

QUESTAR EXPLORATION & PRODUCTIO Surface Owner-APD

Unit

Field

WILDCAT

Type of Work

Location

NENW 32 15S 19E S 0 F L 0 F L GPS Coord (UTM) 601924E 4369947N

#### **Geologic Statement of Basis**

QEP proposes to set 500 feet of surface casing cemented to the surface. An intermediate string will be set at 5,550 feet. Cement for the intermediate string is expected to extend up to approximately 2,400 feet. Cement for the production string will be brought up to approximately 5,000 feet. The base of the moderately saline water is estimated at 6,600 feet. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the proposed location. The surface formation at this location is the Green River Formation. The Green River Formation is made up of interbedded sandstones, shales, and limestones. The Green River Formation can be expected to contain useable aquifers which should be protected. The proposed casing and cement program should adequately protect usable ground water in the area.

**Brad Hill** 

12/14/2006

**APD Evaluator** 

Date / Time

#### **Surface Statement of Basis**

The surface rights at the proposed location are owned by the Ute Tribe. The operator is responsible for obtaining any needed permits and/or rights-of-way from the Ute Tribe.

**Brad Hill** 

12/14/2006

**Onsite Evaluator** 

Date / Time

Conditions of Approval / Application for Permit to Drill

#### **STATE ACTIONS**

### Resource Development Coordinating Committee **Public Lands Policy Coordination Office**

### 5110 State Office Building SLC, UT 84114

|  | . 537-9230  |
|--|---|
| 1. State Agency  | 2. Approximate date project will start:   |
| Oil, Gas and Mining  |   |
| 1594 West North Temple, Suite 1210   | Upon Approval or December 13  |
| Salt Lake City, UT 84114-5801  |   |
| 3. Title of proposed action:   |   |
| Application for Permit to Drill  |   |
| 4. Description of Project:   |   |
| State lease ML-47974, Uintah County, Utah. Thi   | erests. The Division of Oil, Gas and Mining is the  |
| 5. Location and detailed map of land affected (site  | location map required, electronic GIS map   |
| preferred)   | -   |
| (include UTM coordinates where possible) (indica   |   |
| 460' FNL 1948' FWL, NE   |   |
| Section 32, Township 15 South, Ra  | inge 19 East, Uintah County, Utah   |
| 6. Possible significant impacts likely to occur:   |   |
| phase (estimated for five weeks duration). If oil a location will be reclaimed back to a net disturbance road, pipeline, or utility infrastructure. If no oil o reclaimed.                                     | rface disturbance during the drilling and completion and gas in commercial quantities is discovered, the ce of between one and two acres – not including r gas is discovered, the location will be completely |
| 7. Identify local government affected  |   |
| a. Has the government been contacted? No.  |   |
| b. When?   |   |
| c. What was the response?  |   |
| d. If no response, how is the local government   | (s) likely to be impacted?  |
| 8. For acquisitions of land or interests in land by I representative and state senator for the project ar representative, state senator near project site, if a a. Has the representative and senator been con | ea. Name and phone number of state pplicable:   |
| 9. Areawide clearinghouse(s) receiving state action Uintah Basin Association of Governmen  | ts (to be sent out by agency in block 1)  |
| 10. For further information, contact:  | 11. Signature and title of authorized officer   |

**Diana Whitney** (801) 538-5312

Phone:

Gil Hunt, Associate Director

StieZlot

Date: November 29, 2006

#### **STATE OF UTAH**

## DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING

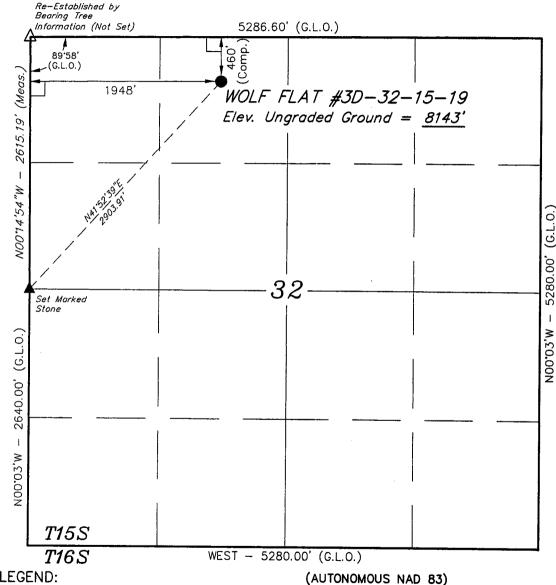
FORM 3

|                   |                         |                      | 101011 01 0        | L, OAO, AND                              | IVIIIIIII          |                     |                           |             |               |
|-------------------|-------------------------|----------------------|--------------------|--|--------------------|---------------------|---------------------------|-------------|---------------|
|                   |                         | APPLICATION          | ON FOR PER         | MIT TO DRILL                             |                    |                     | 5. MINERAL LEASE NO       | ): 6. SU    | RFACE:        |
| 1A. TYPE OF WO    | DE DE                   | RILLY                | DEELETES           |  |                    |                     | ML-47974                  |             | TRIBAL        |
| IA. THE OF WO     | AKK. DI                 |                      | REENTER            | □ DEEPEN                                 |                    |                     | 7. IF INDIAN, ALLOTTE     | E OR TRIE   | BE NAME       |
| D. TVDE OF WEI    |                         | [] a.a arum          |                    |  |                    |                     | UTE T                     | RIBE        |               |
| B. TYPE OF WEL    | L LOIL                  | ☑ GAS OTHE           | ₹ ☑                | SINGLE ZONE M                            | ULTIPLE ZONE       |                     | 8. UNIT OF CA AGREE       | MENT NAM    | 1E:           |
|                   |                         |                      | 1944444            |  |                    |                     | N/                        | Α           |               |
| 2. NAME OF OPE    |                         |                      |                    |  |                    |                     | 9. WELL NAME and NU       | MBER:       |               |
| A ADDD500 05      |                         | STAR EXPLORA         | TION & PRODUC      | · · · · · · · · · · · · · · · · · · ·    |                    |                     | WF 3D-3                   | 2-15-19     |               |
| 3. ADDRESS OF (   |                         |                      |                    | PHONE NUMBER                             |                    |                     | 10. FIELD AND POOL,       | OR WILDO    | AT:           |
| 4. LOCATION OF    |                         | Y VERNAL STATE       | UT ZIP 840         | 1.00/                                    | 81-4331            |                     | UNDESIG                   |             |               |
| AT SURFACE:       |                         |                      | 924X               | 39,47496                                 | 4                  |                     | 11. QTR/QTR, SECTIO       | N, TOWNS    | HIP, RANGE,   |
| AT PROPOSED P     |                         | 7 2/                 | 99474              | -104.815                                 | ^/ <i>c</i> /      |                     | MERIDIAN:                 |             |               |
| ATTROPOSEDE       |                         |                      | IDECTION EDOM NE   | AREST TOWN OR PO                         |                    |                     | NENW 32                   | 15S         | 19E           |
|                   | 2.0                     |                      | ILES SOUTH OF OU   |  | ST OFFICE:         |                     | 12. COUNTY:               |             | 13. STATE:    |
|                   |                         |                      |                    | ,  |                    |                     | UINTAH                    |             | UTAH          |
| 15. DISTANC       |                         | T PROPERTY OR LEA    | SE LINE(FEET)      | 16. NUMBER OF AC                         | RES IN LEASE:      | 1                   | 17. NUMBER OF ACRES A     | SSIGNED     | TO THIS WELL: |
|                   |                         | 460 + /              |                    | 1920                                     | 1                  |                     | 40                        |             |               |
| 18. DISTANC       | E TO NEARES             | WELL (DRILLING, CO   | OMPLETED OR        | 19. PROPOSED DEF                         | OT! I              |                     | ). BOND DESCRIPTION:      |             |               |
|                   |                         | ON THIS LEASE (FEE   |                    | 11,950' MD                               | -114               | 2                   | 965003033                 |             |               |
|                   |                         |                      |                    | 11,330 1115                              |                    |                     | 303003033                 |             |               |
| 21. ELEVATIONS    | (SHOW WHE               | THER DF, RT, GR,ETC  | · )-               | 22 APPROYIMATE I                         | DATE WORK W        | UL CTART.           | 23. ESTIMATED DURATIO     | VI.         | ·····         |
|                   | 8135.3' (               |                      | "                  | 22. APPROXIMATE DATE WORK WILL START: 23 |                    |                     | 30 DAYS                   |             |               |
|                   |                         |                      |                    |  |                    |                     |                           |             |               |
| 24                |                         |                      | PROPOSE            | D CASING AND C                           |                    |                     |                           |             |               |
| SIZE OF HOLE      |                         | SIZE, GRADE, AND W   |                    | SETTING DEP                              | TH                 |                     | QUANTITY, YIELD, AND S    |             |               |
| 8 3/4             | 9 5/8<br>7"             | J-55                 | 36                 | 500'                                     |                    | SEE ATTA            | ACHED CEMENT CALCULATIONS |             |               |
| 6 1/8             | 4 1/2                   | HCP-110<br>P-110     | 26<br>13.5         | 5550'                                    |                    |                     |                           |             |               |
| - 0 1/0           | 7 1/2                   | F-110                | 13.5               | TD                                       |                    |                     |                           |             |               |
|                   |                         |                      |                    |  |                    |                     |                           |             |               |
|                   |                         |                      |                    |  | <del></del>        |                     |                           |             |               |
|                   |                         |                      |                    |  |                    |                     |                           |             |               |
| 25                |                         |                      |                    | ATTACHM                                  | FNTS               |                     |                           |             |               |
| VERIFY THE FOL    | LOWING ARE              | ATTACHED IN ACCOR    | DANCE WITH THE U   | TAH OIL AND GAS CO                       |                    | ENEDAL DILLES       |                           |             |               |
|                   |                         |                      |                    | 0.27412 0710 00                          | , to El titlo ( to | LINEIVAL NOLLS.     |                           |             |               |
| WELL PLAT O       | r map prepari           | ED BY LICENSED SURVE | EYOR OR ENGINEER   | ☑c                                       | OMPLETE DRILL      | JNG PLAN            |                           |             |               |
| ☑ EVIDNECE OF     | DIVISION OF V           | VATER RIGHTS APPROV  | VAL FOR USE OF WAT | TER □ F                                  | ORM 5. IF OPER     | RATOR IS PERSON     | OR COMPANY OTHER THA      | N THE LEA   | SE OV         |
|                   |                         |                      |                    |  | ,                  | 011 011 20 1 E1 001 | OR COMMINITIONIER THE     | *** IIIL LL | OL OV         |
|                   | $\langle \cdot \rangle$ |                      |                    |  |                    |                     |                           |             |               |
| NAME (PLEA        | SE PRINT)               | an Ne                | Ison               |  | TITLE              | Regulatory /        | Affairs                   |             |               |
| CIONATURE         | 178                     | $m \cup 1 \cup 1$    | $\leq \mathcal{N}$ |  |                    |                     |                           |             |               |
| SIGNATURE _       | 71-04                   |                      |                    |  | DATE               | 11/17/06            |                           |             |               |
| (This space for S | tale use only)          | 7                    |                    |  |                    |                     |                           |             |               |
| - /               | 1                       |                      |                    |  |                    |                     |                           |             |               |
| API NUMBER        | ASSIGNED:               | 43-047-              | 38877              |  | APPROVAL           | :                   | n                         | <b></b>     |               |
| ¥                 | •                       |                      |                    |  | · <del>-</del>     |                     | til.(                     | EIV         | ED -          |
|                   |                         |                      |                    |  |                    |                     |                           |             |               |
|                   |                         |                      |                    |  |                    |                     | NOV                       | 2 2 20      | 06            |

DIV. OF OIL, GAS & MINING

**CONFIDENTIAL** 

## T15S, R19E, S.L.B.&M.



#### LEGEND:

= 90° SYMBOL

Section Corner

PROPOSED WELL HEAD.

= SECTION CORNERS LOCATED.

 $\Delta$  = SECTION CORNERS RE-ESTABLISHED. (Not Set On Ground)

LATITUDE = 39'28'29.83'' (39.474953) LONGITUDE = 109'48'57.00" (109.815833) (AUTONOMOUS NAD 27) LATITUDE = 39'28'29.70'' (39.474917) LONGITUDE = 109'48'59.50" (109.816528)

QUESTAR EXPLR. & PROD.

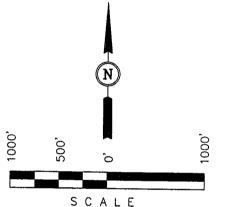
Well location, WOLF FLAT #3D-32-15-19. located as shown in the NE 1/4 NW 1/4 of Section 32, T15S, R19E, S.L.B.&M., Uintah County, Utah.

#### BASIS OF ELEVATION

SPOT ELEVATION AT A ROAD INTERSECTION IN THE NW 1/4 OF SECTION 19, T15S, R19E, S.L.B.&M. TAKEN FROM THE WOLF FLAT, QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 8054 FEET.

#### BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



### CERTIFICATE

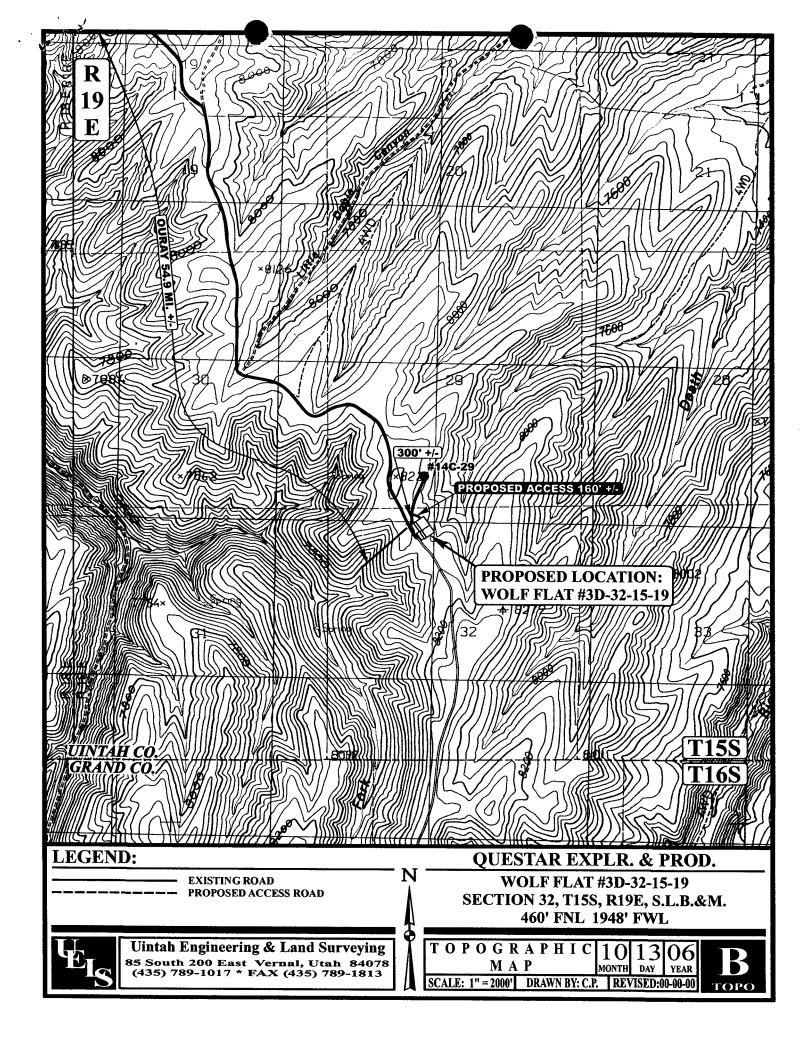
THIS IS TO CERTIFY THAT THE ABOVE FIELD NOTES OF ACTUAL SURVEYS SUPERVISION AND THAT THE SAME BEST OF MY KNOWLEDGE AND



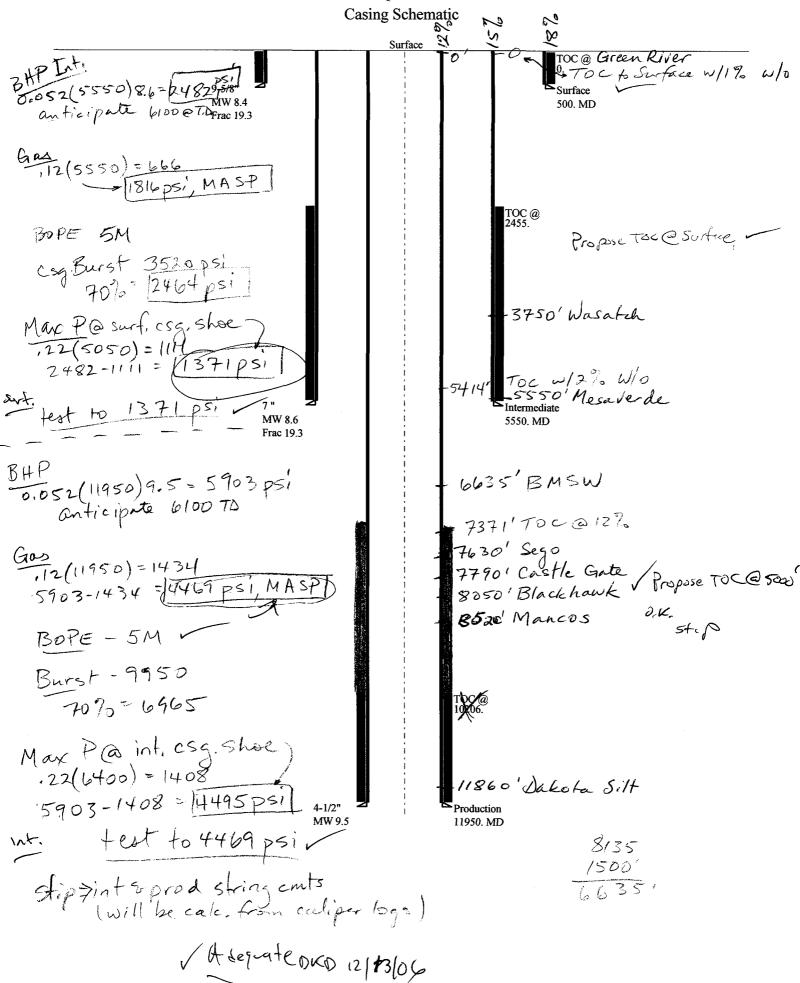
#### LAND SURVEYING UINTAH ENGINEERING 85 SOUTH 200 EAST -VERNAL, UTAH 84078

(435) 789-1017

|                      | , ,                |                           |                 |  |  |  |
|----------------------|--------------------|---------------------------|-----------------|--|--|--|
| SCALE<br>1" = 1000'  | DATE SUR'<br>10-11 |                           | RAWN:<br>-12-06 |  |  |  |
| PARTY<br>B.H. F.Y. K |                    | REFERENCES<br>G.L.O. PLAT |                 |  |  |  |
| WEATHER<br>WARM      | FILE<br>QUEST,     | AR EXPLR. &               | PROD.           |  |  |  |



### 2006-12 QEP WR 3D-3 5-19



Well name:

2006-12 QEP WR 3D-32-15-19

Operator:

Questar Exploration & Production, CO.

String type:

Surface

Project ID:

43-047-38877

Location:

**Uintah County** 

Minimum design factors: **Environment:** 

**Collapse** 

Mud weight: Design is based on evacuated pipe.

**Design parameters:** 

Collapse: 8.400 ppg Design factor

1.125

H2S considered?

Surface temperature:

75 °F 82 °F

Bottom hole temperature: Temperature gradient:

1.40 °F/100ft

Minimum section length:

499 ft

No

Burst:

Design factor

1.00

1.80 (J) 1.80 (J) Cement top:

Surface

**Burst** 

Max anticipated surface

No backup mud specified.

pressure:

440 psi

Internal gradient: Calculated BHP

0.120 psi/ft 500 psi

**Tension:** 

8 Round STC:

8 Round LTC: **Buttress:** 

Premium:

1.60 (J) 1.50 (J)

Body yield: 1.50 (B)

Tension is based on buoyed weight. Neutral point: 438 ft

Non-directional string.

Re subsequent strings:

Next setting depth: Next mud weight: Next setting BHP:

5,550 ft 8.600 ppg 2,479 psi

Fracture mud wt: Fracture depth: Injection pressure: 19.250 ppg 500 ft 500 psi

| Run<br>Seq | Segment<br>Length<br>(ft) | Size<br>(in)                  | Nominal<br>Weight<br>(lbs/ft) | Grade                  | End<br>Finish              | True Vert<br>Depth<br>(ft) | Measured<br>Depth<br>(ft) | Drift<br>Diameter<br>(in)     | Internal<br>Capacity<br>(ft³) |
|------------|---------------------------|-------------------------------|-------------------------------|------------------------|----------------------------|----------------------------|---------------------------|-------------------------------|-------------------------------|
| 1          | 500                       | 9.625                         | 36.00                         | J-55                   | ST&C                       | 500                        | 500                       | 8.796                         | 217                           |
| Run<br>Seq | Collapse<br>Load<br>(psi) | Collapse<br>Strength<br>(psi) | Collapse<br>Design<br>Factor  | Burst<br>Load<br>(psi) | Burst<br>Strength<br>(psi) | Burst<br>Design<br>Factor  | Tension<br>Load<br>(Kips) | Tension<br>Strength<br>(Kips) | Tension<br>Design<br>Factor   |
| 1          | 218                       | 2020                          | 9.260                         | 500                    | 3520                       | 7.04                       | 16                        | 394                           | 25.00 J                       |

Prepared

Helen Sadik-Macdonald

Div of Oil, Gas & Minerals

Phone: 801-538-5357 FAX: 801-359-3940

Date: December 5,2006 Salt Lake City, Utah

Collapse is based on a vertical depth of 500 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:

2006-12 QEP WR 3D-32-15-19

Minimum design factors:

Operator:

Questar Exploration & Production, CO.

String type:

Intermediate

Project ID: 43-047-38877

Location:

**Uintah County** 

**Design parameters:** 

Collapse

Mud weight: Design is based on evacuated pipe.

8.600 ppg

Collapse: Design factor

1.125

**Environment:** 

H2S considered? Surface temperature:

No 75 °F

Bottom hole temperature: Temperature gradient:

153 °F 1.40 °F/100ft

Minimum section length:

500 ft

**Burst:** 

Design factor

1.00

Cement top:

2.455 ft

**Burst** 

Max anticipated surface

No backup mud specified.

pressure:

3,268 psi

Internal gradient: Calculated BHP

0.220 psi/ft 4,489 psi

**Tension:** 

8 Round STC:

8 Round LTC: **Buttress:** 

Premium: Body yield: 1.60 (J) 1.50 (J) 1.50 (B)

1.80 (J)

1.80 (J)

Tension is based on buoyed weight. Neutral point: 4,830 ft

Re subsequent strings:

Non-directional string.

Next setting depth: Next mud weight: Next setting BHP:

11,950 ft 9.500 ppg 5,897 psi

Fracture mud wt: Fracture depth: Injection pressure: 19.250 ppg 5.501 ft 5,501 psi

| Run<br>Seq | Segment<br>Length<br>(ft)<br>5550 | Size<br>(in)<br>7                     | Nominal<br>Weight<br>(lbs/ft)<br>26.00 | Grade<br>HCP-110               | End<br>Finish<br>LT&C              | True Vert Depth (ft) 5550         | Measured Depth (ft) 5550         | Drift<br>Diameter<br>(in)<br>6.151   | Internal<br>Capacity<br>(ft³)<br>1192.3 |
|------------|-----------------------------------|---------------------------------------|--|--------------------------------|------------------------------------|-----------------------------------|----------------------------------|--------------------------------------|---|
| Run<br>Seq | Collapse<br>Load<br>(psi)<br>2479 | Collapse<br>Strength<br>(psi)<br>7800 | Collapse<br>Design<br>Factor<br>3.146  | Burst<br>Load<br>(psi)<br>4489 | Burst<br>Strength<br>(psi)<br>9950 | Burst<br>Design<br>Factor<br>2.22 | Tension<br>Load<br>(Kips)<br>126 | Tension<br>Strength<br>(Kips)<br>693 | Tension<br>Design<br>Factor<br>5.52 J   |

Prepared

Helen Sadik-Macdonald Div of Oil, Gas & Minerals Phone: 801-538-5357 FAX: 801-359-3940

Date: December 5,2006 Salt Lake City, Utah

Collapse is based on a vertical depth of 5550 ft, a mud weight of 8.6 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:

2006-12 QEP WR 3D-32-15-19

Operator:

Questar Exploration & Production, CO.

String type:

Location:

**Uintah County** 

**Production** 

Project ID:

43-047-38877

**Design parameters:** 

Collapse

Mud weight:

9.500 ppg

Design is based on evacuated pipe.

Minimum design factors:

Collapse: Design factor

1.125

**Environment:** 

H2S considered?

Surface temperature: 75 °F 242 °F Bottom hole temperature:

Temperature gradient:

1.40 °F/100ft

Minimum section length: 1,500 ft

No

Burst:

Design factor

1.00

Cement top:

10,206 ft

**Burst** 

Max anticipated surface

pressure:

3,268 psi 0.220 psi/ft

Internal gradient: Calculated BHP

5,897 psi

No backup mud specified.

**Tension:** 

8 Round STC:

8 Round LTC: **Buttress:** 

Premium: Body yield:

1.50 (J) 1.50 (B)

Tension is based on buoyed weight. Neutral point: 10,274 ft

Non-directional string. 1.80 (J)

1.80 (J)

1.60 (J)

| Run<br>Seq | Segment<br>Length<br>(ft)         | Size<br>(in)                           | Nominal<br>Weight<br>(lbs/ft)         | Grade                          | End<br>Finish                       | True Vert<br>Depth<br>(ft)        | Measured<br>Depth<br>(ft)        | Drift<br>Diameter<br>(in)            | Internal<br>Capacity<br>(ft³)         |
|------------|-----------------------------------|--|---------------------------------------|--------------------------------|-------------------------------------|-----------------------------------|----------------------------------|--------------------------------------|---------------------------------------|
| 1          | 11950                             | 4.5                                    | 13.50                                 | P-110                          | LT&C                                | 11950                             | 11950                            | 3.795                                | 1001.5                                |
| Run<br>Seq | Collapse<br>Load<br>(psi)<br>5897 | Collapse<br>Strength<br>(psi)<br>10680 | Collapse<br>Design<br>Factor<br>1.811 | Burst<br>Load<br>(psi)<br>5897 | Burst<br>Strength<br>(psi)<br>12410 | Burst<br>Design<br>Factor<br>2.10 | Tension<br>Load<br>(Kips)<br>139 | Tension<br>Strength<br>(Kips)<br>338 | Tension<br>Design<br>Factor<br>2.44 J |

Prepared

Helen Sadik-Macdonald

Div of Oil, Gas & Minerals

Phone: 801-538-5357 FAX: 801-359-3940

Date: December 5,2006 Salt Lake City, Utah

Collapse is based on a vertical depth of 11950 ft, a mud weight of 9.5 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

From:

Robert Clark Mason, Diana

To: Date:

12/11/2006 9:05 AM

Subject:

RDCC short turn around response

CC:

Anderson, Tad; Mcneill, Dave; Wright, Carolyn

The following comments are in response to RDCC short turn around items RDCC #7349 and RDCC #7353.

**RDCC #7349, Comments begin:** The Bill Barrett Corporation proposal to drill the 1-3 DLB 1-15-56 wildcat well, in Duchesne County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board. If any compressor or pump stations are constructed at the site, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. A copy of the rules is found at <a href="https://www.rules.utah.gov/publicat/code/r307/r307.htm">www.rules.utah.gov/publicat/code/r307/r307.htm</a>.

The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at <a href="https://www.rules.utah.gov/publicat/code/r307/r307.htm">www.rules.utah.gov/publicat/code/r307/r307.htm</a>. Comments end.

**RDCC #7353, Comments begin:** The Questar Exploration & Production Co. proposal to drill the WF 3D-32-15-19 wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board. If any compressor or pump stations are constructed at the site, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. A copy of the rules is found at <a href="https://www.rules.utah.gov/publicat/code/r307/r307.htm">www.rules.utah.gov/publicat/code/r307/r307.htm</a>.

The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at <a href="https://www.rules.utah.gov/publicat/code/r307/r307.htm">www.rules.utah.gov/publicat/code/r307/r307.htm</a>. Comments end.

Robert Clark Utah Division of Air Quality 801-536-4435



#### State of Utah

#### Department of Natural Resources

MICHAEL R. STYLER Executive Director

Division of Oil, Gas & Mining

JOHN R. BAZA Division Director JON M. HUNTSMAN, JR.

GARY R. HERBERT Lieutenant Governor

December 14, 2006

Questar Exploration & Production, Co. 11002 E 17500 S Vernal, UT 84078

Re: WF 3D-32-15-19 Well, 460' FNL, 1948' FWL, NE NW, Sec. 32, T. 15 South, R. 19 East, Uintah County, Utah

#### Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-38877.

Sincerely,

Gil Hunt

Associate Director

pab Enclosures

cc: Uintah County Assessor (via e-mail)

Bureau of Land Management, Vernal District Office

| Operator:              | Questar Exploration & Production, Co. |                    |                   |  |  |  |
|------------------------|---------------------------------------|--------------------|-------------------|--|--|--|
| Well Name & Number     | WF 3D-32-15-19                        |                    |                   |  |  |  |
| API Number:            | 43-047-38877                          |                    |                   |  |  |  |
| Lease:                 | ML-                                   | 47974              |                   |  |  |  |
| Location: <u>NE NW</u> | Sec. 32                               | T. <u>15 South</u> | <b>R.</b> 19 East |  |  |  |

#### **Conditions of Approval**

#### 1. General

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### 2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

Contact Dan Jarvis at (801) 538-5338

#### 3. Reporting Requirements

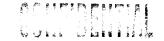
All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

- 4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.
- 5. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

Page 2 43-047-38877 December 14, 2006

- 6. The lands subject to this application and the associated mineral rights have been transferred to the Ute Indian Tribe as fee lands, and not as part of the reservation lands pursuant to Public Law 106-398, the Floyd D Spence National Defense Authorization Act for Fiscal Year 2001. The Division on behalf of the State of Utah has been directed by Utah Code §§40-6-1 et seq. to exercise jurisdiction over all oil and gas exploration and development on all lands within the State of Utah, in order to promote the greatest economic recovery of oil and gas, and to protect the interests of the general public in the natural resources of the state. The operator is responsible for obtaining the proper permits from both the State of Utah, Division of Oil Gas and Mining, and from the Ute Indian Tribe for all oil and gas related activities that may be permitted and under the regulations of the State of Utah or the Ute Indian Tribe.
- 7. Cement volume for the 4 1/2" production string shall be determined from actual hole diameter in order to place cement from the pipe setting depth back to 5000' MD as indicated in the submitted drilling plan.
- 8. Operator shall comply with applicable recommendations resulting from Resource Development Coordinating Committee review. Statements attached.
- 9. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)

#### STATE OF UTAH **DEPARTMENT OF NATURAL RESOURCES** DIVISION OF OIL. GAS AND MINING



|   |  | SE DESIGNATION AND SERIAL NUMBER: 47974          |                                  |          |                                      |  |  |  |
|---|--|--|----------------------------------|----------|--------------------------------------|--|--|--|
| SUNDR   |  | IDIAN, ALLOTTEE OR TRIBE NAME:<br>E <b>TRIBE</b> |                                  |          |                                      |  |  |  |
| Do not use this form for proposals to drill<br>drill horizontal | new wells, significantly deepen existing wells below culaterals. Use APPLICATION FOR PERMIT TO DRILL | rrent bottom-hole dep<br>form for such proposa   | th, reenter plugged wells, or to | 7. UNI   | TOLCA AGREEMENT NAME:                |  |  |  |
| 1. TYPE OF WELL OIL WELL  | . Gas well 🗸 other_  |  |                                  |          | L NAME and NUMBER:<br>3D-32-15-19    |  |  |  |
| 2. NAME OF OPERATOR:  Questar Exploration & Pr                  | oduction Co.   |  |                                  |          | NUMBER:<br>4738877                   |  |  |  |
| 3. ADDRESS OF OPERATOR: 11002 E. 17500 S.                       | TY VERNAL STATE UT ZIF   | ,84078   | PHONE NUMBER: (435) 781-4331     |          | ELD AND POOL, OR WILDCAT: DESIGNATED |  |  |  |
| 4. LOCATION OF WELL   |  |  |                                  |          |                                      |  |  |  |
| FOOTAGES AT SURFACE: 460'                                       | FNL 1948' FWL  |  |                                  | COUNT    | Y: UINTAH                            |  |  |  |
| QTR/QTR, SECTION, TOWNSHIP, RA                                  | NGE, MERIDIAN: NENW 32 15S 1   | 19E  |                                  | STATE    | :<br>UTAH                            |  |  |  |
| 11. CHECK APP   | PROPRIATE BOXES TO INDICAT   | TE NATURE  | OF NOTICE, REPO                  | RT, O    | R OTHER DATA                         |  |  |  |
| TYPE OF SUBMISSION  |  | Т  | YPE OF ACTION                    |          |                                      |  |  |  |
| NOTICE OF INTENT  | ACIDIZE  | DEEPEN   | <del>-</del>                     |          | REPERFORATE CURRENT FORMATION        |  |  |  |
| (Submit in Duplicate)   | ALTER CASING   | FRACTURE   | TREAT                            |          | SIDETRACK TO REPAIR WELL             |  |  |  |
| Approximate date work will start:                               | CASING REPAIR  | NEW CONS   | TRUCTION                         |          | TEMPORARILY ABANDON                  |  |  |  |
|   | CHANGE TO PREVIOUS PLANS   | OPERATOR   | CHANGE                           |          | TUBING REPAIR                        |  |  |  |
|   | CHANGE TUBING  | PLUG AND   | ABANDON                          |          | VENT OR FLARE                        |  |  |  |
| SUBSEQUENT REPORT   | CHANGE WELL NAME   | PLUG BACK  | (                                |          | WATER DISPOSAL                       |  |  |  |
| (Submit Original Form Only)                                     | CHANGE WELL STATUS   | PRODUCTION                                       | ON (START/RESUME)                |          | WATER SHUT-OFF                       |  |  |  |
| Date of work completion:  | COMMINGLE PRODUCING FORMATIONS   | RECLAMAT   | ION OF WELL SITE                 | Z        | OTHER: APD EXTENSION                 |  |  |  |
|   | CONVERT WELL TYPE  | RECOMPLE   | TE - DIFFERENT FORMATION         |          |                                      |  |  |  |
| 12. DESCRIBE PROPOSED OR C                                      | COMPLETED OPERATIONS. Clearly show all   | pertinent details in                             | cluding dates, depths, volume    | es, etc. |                                      |  |  |  |
|   | oduction Co. hereby requests a   | ,  | - , ,                            |          | q                                    |  |  |  |
| Questai Exploration & Fi  | oduction co. Hereby requests a   | i year exteris                                   | ION ON THE VVI SD-32             | 15-1     | <b>3</b> .                           |  |  |  |
|   |  |  |                                  |          |                                      |  |  |  |
|   |  |  |                                  |          |                                      |  |  |  |
|   | A ~ * C \ (C   | d by the vision of                               |                                  |          |                                      |  |  |  |
|   |  |  |                                  |          |                                      |  |  |  |
|   |  |  |                                  |          |                                      |  |  |  |
|   | Oil, Gas and Mining  |  |                                  |          |                                      |  |  |  |
|   | Date: 17 -1  | FB-51  | <b>^</b> _                       |          |                                      |  |  |  |
|   | Date: L  | Mill   | $\overline{\mathcal{M}}$         |          |                                      |  |  |  |
| COPY SENTIO OF SATOR  | By: De   | The the  |                                  |          |                                      |  |  |  |
| Date: 1/2/200   | f  | $\mathcal{M}$                                    |                                  |          |                                      |  |  |  |

(This space for State use only)

NAME (PLEASE PRINT)

Laura Bills

RECEIVED

**Regulatory Affairs** 

12/7/2007

DATE

DEC 1 0 2007 CONFIDENTIAL

## Application for Permit to Drill Request for Permit Extension Validation (this form should accompany the Sundry Notice requesting permit extension)

| API:<br>Well Name:       | 43-047-38877                       |  |   |
|--------------------------|------------------------------------|--|---|
| Location:                |                                    | L, NENW, SEC. 32, T15S, I  | R19E  |
| <b>Company Per</b>       | mit Issued to:                     | Questar Exploration & Pro  |   |
| Date Original            | Permit Issued:                     | 12/14/2006   |   |
| above, hereby            | verifies that the i                | legal rights to drill on t<br>nformation as submitte<br>nains valid and does n |   |
| Following is a verified. | checklist of some                  | items related to the ap  | pplication, which should be                   |
| •                        | rivate land, has then updated? Yes | ne ownership changed,<br>□ No ☑  | if so, has the surface                        |
| •                        |                                    | he vicinity of the proposits for this location? Ye                             | sed well which would affect<br>s ☐ No ☑       |
|                          | =                                  | er agreements put in pla<br>roposed well? Yes⊟N                                | ace that could affect the<br>o☑               |
|                          | •                                  | o the access route incl<br>roposed location? Yes                               | uding ownership, or right-<br>□ No ☑          |
| Has the appro-           | ved source of war                  | ter for drilling changed   | ? Yes□No☑                                     |
|                          | ire a change in p                  | hanges to the surface lans from what was dis                                   | location or access route cussed at the onsite |
| Is bonding still         | in place, which c                  | overs this proposed we   | ell? Yes⊠No□                                  |
| $\mathcal{A}$            | Bi                                 | 11.  | 12/7/2007                                     |
| Signatura                | su Du                              |  | Date  |
| Signature                |                                    |  | Date  |
| Title: REGULA            | TORY AFFAIRS                       |  |   |
| Representing:            | Questar Exploratio                 | n & Production Co.   |   |
|                          |                                    |  | RECEIVED                                      |
|                          |                                    |  | DEC 1 0 2007                                  |

DIV. OF OIL, GAS & MINING

| DEPARTMENT OF NATURAL RESOURCES   | FORM 9   |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|
| DIVISION OF OIL, GAS AND MINING   | 5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47974   |  |  |  |  |  |  |  |
| SUNDRY NOTICES AND REPORTS ON WELLS   | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME:<br>UTE TRIBE |  |  |  |  |  |  |  |
| Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to  | 7. UNIT or CA AGREEMENT NAME:                      |  |  |  |  |  |  |  |
| drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.   | N/A  |  |  |  |  |  |  |  |
| 1. TYPE OF WELL OIL WELL GAS WELL OTHER   | 8. WELL NAME and NUMBER:<br>WF 3D-32-15-19         |  |  |  |  |  |  |  |
| 2. NAME OF OPERATOR: QUESTAR EXPLORATION AND PRODUCTION COMPANY   | 9. API NUMBER:<br>4304738877                       |  |  |  |  |  |  |  |
| 3. ADDRESS OF OPERATOR:  14000 F 47500 C VEDNAL DE 47500 C VEDNAL | 10. FIELD AND POOL, OR WILDCAT:                    |  |  |  |  |  |  |  |
| 11002 E. 17500 S. CITY VERNAL STATE UT ZIP 84078 (435) 781-4331   | UNDESIGNATED                                       |  |  |  |  |  |  |  |
| FOOTAGES AT SURFACE: 460' FNL 1948' FWL   | COUNTY: UINTAH                                     |  |  |  |  |  |  |  |
| QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 32 15S 19E  | STATE:   |  |  |  |  |  |  |  |
|   | UTAH   |  |  |  |  |  |  |  |
| 11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPO  | RT, OR OTHER DATA                                  |  |  |  |  |  |  |  |
| TYPE OF SUBMISSION TYPE OF ACTION   |  |  |  |  |  |  |  |  |
| NOTICE OF INTENT  | REPERFORATE CURRENT FORMATION                      |  |  |  |  |  |  |  |
| (Submit in Duplicate)  ALTER CASING  FRACTURE TREAT   | SIDETRACK TO REPAIR WELL                           |  |  |  |  |  |  |  |
| Approximate date work will start: CASING REPAIR NEW CONSTRUCTION  | TEMPORARILY ABANDON                                |  |  |  |  |  |  |  |
| CHANGE TO PREVIOUS PLANS OPERATOR CHANGE  | TUBING REPAIR                                      |  |  |  |  |  |  |  |
| CHANGE TUBING LUG AND ABANDON   | VENT OR FLARE                                      |  |  |  |  |  |  |  |
| SUBSEQUENT REPORT CHANGE WELL NAME PLUG BACK (Submit Original Form Only)  | WATER DISPOSAL                                     |  |  |  |  |  |  |  |
| Date of work completion:  CHANGE WELL STATUS  PRODUCTION (START/RESUME)   | WATER SHUT-OFF                                     |  |  |  |  |  |  |  |
| COMMINGLE PRODUCING FORMATIONS RECLAMATION OF WELL SITE   | ✓ OTHER: <u>APD EXTENSION</u>                      |  |  |  |  |  |  |  |
| CONVERT WELL TYPE RECOMPLETE - DIFFERENT FORMATION  |  |  |  |  |  |  |  |  |
| 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volum Questar Exploration & Production Company hereby requests a 1 year extension on the WF  | ,  |  |  |  |  |  |  |  |
| Approved by the Utah Division of Oil, Gas and Mining  |  |  |  |  |  |  |  |  |
| Date: 12-72-08  By:   |  |  |  |  |  |  |  |  |
| NAME (PLEASE PRINT) Laura Bills Associate Regula  | atory Affairs Analyst                              |  |  |  |  |  |  |  |
| SIGNATURE TRANSPORTED DATE 12/10/2008   |  |  |  |  |  |  |  |  |
| This space for State use only)  |  |  |  |  |  |  |  |  |

**COPY SENT TO OPERATOR** 

Initials:

**RECEIVED** 

DEC 1 5 2008

CONFIDENTIAL

# Application for Permit to Drill Request for Permit Extension Validation

Validation (this form should accompany the Sundry Notice requesting permit extension)

43-047-38877

API:

| Well Name: WF 3D-32-15-19 Location: 460' FNL 1948' FWL, NENW, SEC. 32, T15S, R19E Company Permit Issued to: Questar Exploration & Production Company Date Original Permit Issued: 12/14/2006  |
|---|
| The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. |
| Following is a checklist of some items related to the application, which should be verified.  |
| If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes □ No ☑  |
| Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes□No☑   |
| Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes□No☑   |
| Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes ☐ No ☑  |
| Has the approved source of water for drilling changed? Yes□No☑  |
| Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes□No☑   |
| Is bonding still in place, which covers this proposed well? Yes ☑ No □  |
| Signature Date  |
| Title: Associate Regulatory Affairs Analyst   |
| Representing: Questar Exploration & Production Company  |
| RECEIVED  |

DIV. OF OIL, GAS & MINING

DEC 1 5 2008

|   |   |  |                               |                | FORM 9                              |
|---|---|--|-------------------------------|----------------|-------------------------------------|
|   | STATE OF UTAH DEPARTMENT OF NATURAL RESOUR  |  |                               |                | I SKM 3                             |
|   | 5.LEAS<br>ML-4  | SE DESIGNATION AND SERIAL NUMBER: 7974 |                               |                |                                     |
|   | RY NOTICES AND REPORT   |  | _                             | 6. IF I        | NDIAN, ALLOTTEE OR TRIBE NAME:      |
|   | sals to drill new wells, significantly deep<br>ugged wells, or to drill horizontal laterals |  |                               | 7.UNI          | T or CA AGREEMENT NAME:             |
| 1. TYPE OF WELL<br>Gas Well   |   |  |                               |                | LL NAME and NUMBER:<br>D-32-15-19   |
| 2. NAME OF OPERATOR:<br>QUESTAR EXPLORATION & PR  | ODUCTION CO   |  |                               |                | <b>NUMBER:</b><br>7388770000        |
| 3. ADDRESS OF OPERATOR:<br>11002 East 17500 South , Ve  | rnal, UT, 84078 435 78  | P<br>1-4362                            | PHONE NUMBER:<br>Ext          | 9. FIE<br>WILD | LD and POOL or WILDCAT:<br>CAT      |
| 4. LOCATION OF WELL<br>FOOTAGES AT SURFACE:<br>0460 FNL 1948 FWL<br>QTR/QTR, SECTION, TOWNSHI | TO DANCE MEDITIAN.  |  |                               | COUN           | AH                                  |
|   | : Township: 15.0S Range: 19.0E Meridia  | n: S                                   |                               | STATE<br>UTAH  |                                     |
| 11.   | CK APPROPRIATE BOXES TO INDIC   | ATE N                                  | ATURE OF NOTICE, REPO         | RT, OR OT      | HER DATA                            |
| TYPE OF SUBMISSION  |   |  | TYPE OF ACTION                |                |                                     |
|   | ACIDIZE   |  | ALTER CASING                  |                | CASING REPAIR                       |
| NOTICE OF INTENT Approximate date work will start:  | CHANGE TO PREVIOUS PLANS  |  | CHANGE TUBING                 | Г              | CHANGE WELL NAME                    |
| 12/22/2010  | CHANGE WELL STATUS  | _                                      | COMMINGLE PRODUCING FORMATION | NS             | CONVERT WELL TYPE                   |
|   | DEEDEN  | _                                      | FRACTURE TREAT                |                | NEW CONSTRUCTION                    |
| SUBSEQUENT REPORT Date of Work Completion:  | OPERATOR CHANGE   |  | PLUG AND ABANDON              | _              | PLUG BACK                           |
|   | _   | _                                      |                               |                | -                                   |
| SPUD REPORT   | PRODUCTION START OR RESUME  | _                                      | RECLAMATION OF WELL SITE      |                | RECOMPLETE DIFFERENT FORMATION      |
| Date of Spud:   | REPERFORATE CURRENT FORMATION   | _                                      | SIDETRACK TO REPAIR WELL      | L              | TEMPORARY ABANDON                   |
| _   | │   | _                                      | VENT OR FLARE                 |                | WATER DISPOSAL                      |
| DRILLING REPORT Report Date:  | │   | ا د                                    | SI TA STATUS EXTENSION        | •              | APD EXTENSION                       |
|   | ☐ WILDCAT WELL DETERMINATION  |  | OTHER                         | ОТ             | HER:                                |
| l .   | DMPLETED OPERATIONS. Clearly show all p   |  |                               |                | , etc.                              |
|   | n and Production Company h  |  |                               | ar             | Approved by the                     |
| extensi   | on for the APD on the above   | capti                                  | ioned well.                   |                | Approved by the<br>Utah Division of |
|   |   |  |                               |                | il, Gas and Mining                  |
|   |   |  |                               |                | .,                                  |
|   |   |  |                               | Date:          | December 21, 2009                   |
|   |   |  |                               | F              | 00 rul 110                          |
|   |   |  |                               | By: <u>()</u>  | 2000 Flore                          |
|   |   |  |                               |                | 33                                  |
|   |   |  |                               |                |                                     |
|   |   |  |                               |                |                                     |
|   |   |  |                               |                |                                     |
|   |   |  |                               |                |                                     |
|   |   |  |                               |                |                                     |
| NAME (PLEASE PRINT) Jan Nelson  | PHONE NUMBI<br>435 781-4331   | ER                                     | TITLE Permit Agent            |                |                                     |
| SIGNATURE   | .55 / 61   1551   |  | DATE                          |                |                                     |
| N/A   |   |  | 12/17/2009                    |                |                                     |



#### The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices** 

#### Request for Permit Extension Validation Well Number 43047388770000

**API:** 43047388770000 **Well Name:** WF 3D-32-15-19

Location: 0460 FNL 1948 FWL QTR NENW SEC 32 TWNP 150S RNG 190E MER S

Company Permit Issued to: QUESTAR EXPLORATION & PRODUCTION CO

**Date Original Permit Issued: 12/14/2006** 

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

| ire revision. Following is a checklist of some items related to the application, which should be verified.   |
|--|
| <ul> <li>If located on private land, has the ownership changed, if so, has the surface agreement been<br/>updated? Yes No</li> </ul>   |
| <ul> <li>Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or<br/>siting requirements for this location?</li> <li>Yes</li> <li>No</li> </ul>                           |
| <ul> <li>Has there been any unit or other agreements put in place that could affect the permitting or operation<br/>of this proposed well? Yes</li> <li>No</li> </ul>  |
| <ul> <li>Have there been any changes to the access route including ownership, or rightof- way, which could<br/>affect the proposed location?</li> <li>Yes</li> <li>No</li> </ul>                                     |
| • Has the approved source of water for drilling changed? 🗍 Yes 📵 No  |
| <ul> <li>Have there been any physical changes to the surface location or access route which will require a<br/>change in plans from what was discussed at the onsite evaluation?</li> <li>Yes</li> <li>No</li> </ul> |
| • Is bonding still in place, which covers this proposed well?   • Yes   • No Utah Division of Oil, Gas and Mining  |

**Signature:** Jan Nelson **Date:** 12/17/2009

Title: Permit Agent Representing: QUESTAR EXPLORATION & PRODUCTIO Page: December 21, 2009

Bv:

## Division of Oil, Gas and Mining OPERATOR CHANGE WORKSHEET

(for state use only)

ROUTING CDW

| The operator of the well(s) listed below has changed, effective:  FROM: (Old Operator):  N5085-Questar Exploration and Production Company 1050 17th St, Suite 500 Denver, CO 80265  Phone: 1 (303) 308-3048  CA No.  CA No.  Unit:  WELL NAME  SEC TWN RNG API NO SEE ATTACHED  SEE ATTACHED  SEC TWN RNG API NO SEE ATTACHED  SEC TWN RNG API NO SEC TYPE WELL TYPE   |           |
|--|-----------|
| FROM: (Old Operator):           N5085-Questar Exploration and Production Company         N3700-QEP Energy Company           1050 17th St, Suite 500         1050 17th St, Suite 500           Denver, CO 80265         Denver, CO 80265           Phone: 1 (303) 308-3048         Phone: 1 (303) 308-3048           WELL NAME         SEC TWN RNG API NO         ENTITY LEASE TYPE WELL NO   |           |
| N5085-Questar Exploration and Production Company 1050 17th St, Suite 500 Denver, CO 80265  Phone: 1 (303) 308-3048  CA No.  WELL NAME  SEC TWN RNG API NO  ENTITY LEASE TYPE WELL NO  TYPE   |           |
| 1050 17th St, Suite 500 Denver, CO 80265  Phone: 1 (303) 308-3048  CA No.  Unit:  WELL NAME  SEC TWN RNG API NO ENTITY LEASE TYPE WELL NO TYPE   |           |
| Denver, CO 80265  Phone: 1 (303) 308-3048  CA No.  Unit:  WELL NAME  SEC TWN RNG API NO ENTITY LEASE TYPE WELL NO TYPE   |           |
| Phone: 1 (303) 308-3048    CA No.   Unit:  |           |
| WELL NAME  SEC TWN RNG API NO ENTITY LEASE TYPE WELL NO TYPE   |           |
| WELL NAME  SEC TWN RNG API NO  ENTITY LEASE TYPE WELL NO  TYPE   |           |
| NO TYPE  |           |
| SEE ATTACHED NO TYPE   | WELL      |
| SEE ATTACHED   | STATUS    |
|  |           |
|  |           |
| OPEDATOD CITANCES DOCUMENTA TRON   |           |
| OPERATOR CHANGES DOCUMENTATION Enter date after each listed item is completed  |           |
|  |           |
| 6/28/2010  |           |
| 0/26/2010  |           |
| 1. Let be represented by the Department of Commerce, Division of Corporations Database on:   | 6/24/2010 |
| F- (D(40.0 0)TV - 3.5  |           |
| 5h Inspections of ADA 11 (C. 11)   |           |
|  |           |
|  |           |
| or operator change for all wells listed as February 11. It is a supproved the merger, name change,   |           |
| or operator change for all wells listed on Federal or Indian leases on:  BLM 8/16/2010 BIA  7. Federal and Indian Units:   | not yet   |
|  |           |
| The BLM or BIA has approved the successor of unit operator for wells listed on:  8. Federal and Indian Communication Agreements ("CA").  |           |
| Tigitements ( CA ).  |           |
| The BLM or BIA has approved the operator for all wells listed within a CA on:  N/A   |           |
| 9. Underground Injection Control ("UIC") Division has approved UIC Form 5 Transfer of Authority to   |           |
| Inject, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on:  6/29/201   | <u>o</u>  |
| DATA ENTRY:  |           |
| 1. Changes entered in the Oil and Gas Database on:  6/30/2010  | i.        |
| 2. Changes have been entered on the Monthly Operator Change Spread Sheet on:  6/30/2010  |           |
| 3. Bond information entered in RBDMS on:  6/30/2010  |           |
| 4. Fee/State wells attached to bond in RBDMS on:  6/30/2010  |           |
| 5. Injection Projects to new operator in RBDMS on:  6. Receipt of Accounts of P. III P P |           |
| 6. Receipt of Acceptance of Drilling Procedures for APD/New on:  n/a   |           |
| BOND VERIFICATION:   |           |
| 1. Federal well(s) covered by Bond Number: ESB000024   |           |
| 2. Indian well(s) covered by Bond Number:  965010693   |           |
| 3a. (R649-3-1) The NEW operator of any state/fee well(s) listed covered by Bond Number 965010695   |           |
| 3b. The FORMER operator has requested a release of liability from their bond on:  Note 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.  |           |
| 4. (R649-2-10) The NEW operator of the fee wells has been contacted and informed by a letter from the Division   |           |
| of their regnanciality to notify all interest and cold to 1  |           |
| COMMENTS:  |           |

#### STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES

| SUNDRY NOTICES AND REPORTS ON WELLS  De not use the time for properation to the converse, supplication for the converse to the |   | 5. LEASE DESIGNATION AND SERIAL NUMBER: See attached  |  |  |  |  |
|--|---|---|--|--|--|--|
| 1 TYPE OF WELL  OIL WELL GAS WELL  OTHER  See attached  LA PRIVINGER  A MISSIAN  A MISSI |   |   |  | -  | See attached   |  |
| Control of Notice   Cont   | Do not use this form for proposals to drill indicantal li   | new wells, significantly deepen existing wells below ou<br>aterals. Use APPLICATION FOR PERMIT TO DRILL   | rrent bottom-hole dept<br>form for such proposal:  | n, reenter plugged wells, or to<br>s.  | 1 _  |  |
| 2 MAD EF OPERATOR Questar Exploration and Production Company  N 508 5  3 ADDRESS OF OPERATOR 1000 17th Street, Suite 500 Coll.  4 LOCATION OF WELL FOOTAGES AT SURFACE. See attached  COUNTY: Attached  TYPE OF ACTION  TYPE OF SUBMISSION  TYPE OF ACTION  NOTICE OF INTENT (Somin to Distinct)  ACTICE OF INTENT (Somin to Distinct)  ACTICE OF ACTION  ACTICE O | 1 TYPE OF WELL  |   |  |  | l _  |  |
| 3 ADDRESS OF DERACH 1990 OF LOWER 1990 OF LOWER 1990 OF STATE CO 20 80265 (303) 672-6900 See attached COUNTY. ACTACH COUNTY. Attached County. And COUNTY. Attached County. Attached County. Attached County. And COUNTY. Attached County. Attached County. Attached County. And COUNTY. Attached County. Attached County. Attached County. A |   | 116   | 100  |  |  |  |
| 1003/1016 Well   1004/1016      |   | roduction Company /V 2  |  | 2.10.15  |  |  |
| PROTACES AT SURFACE. See attached  GRECTER, SECTION, TOWNSHIP, RANGE, MERIDAN.  STATE  UTAH  11  CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA  TYPE OF SUBMISSION  NOTICE OF INTENT SUBMISSION  ACIDIZE  CASING REPART CASING REPART PORMATION  CHANGE TUBING  CHANGE TUBING  CHANGE TUBING  CHANGE TUBING  CHANGE WELL STATUS  CHANGE WELL STATUS  CHANGE WELL STATUS  CHANGE WELL TYPE.  COMMINGUE PRODUCING FORMATIONS  TO HER CHANGE TUBING  TO HERE.  COMMINGUE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertitented deals including dates, depths, volumes, etc.  Effective June 14, 2010 Questar Exploration and Production Company change involves only an internal corporate name change and no third party change of operator is involved. The same employees will continue to be responsible for operations of the properties described on the attached list. All operations will continue to be covered by bond numbers:  Federal Bond Number: 9650002376 (BLM Reference No. ESB000024)  The attached document is an all inclusive list of the wells operated by Questar Exploration and Production Company. As of June 14, 2010 QEP Energy Company assumes all rights, duties and obligations as operator of the properties as described on the list.  HAME (FILEASE PRINT) Morgan Anderson  TITLE Regulatory Affairs Analyst  FRACTIONS  FRACTIONS  TITLE REPORTS  THE REPORTS COUNTY ABRICTORY  TO THER COMPLETE DEPREATIONS  THE REPORTS COUNTY ABRICTORY  THE OPERATORY COUNTY ABRICTORY  THE OPERATORY ABRICTORY  THE OPERATORY ABRICTORY  THE OPERATORY ABRICTORY  THE OPERATORY ABRICTORY  TO THER COUNTY ABRICTORY  THE OPERATORY ABRICTORY  THE OPERATORY ABRICTORY  THE OPERATORY  THE OPERATORY  THE OPERATORY ABRICTORY  THE OPERATORY  THE OPER | 1050 17th Street, Suite 500   | Denver STATE CO   | 80265  |  |  |  |
| TYPE OF SUBMISSION TYPE OF ACTION    NOTICE OF INTENT   ACIDAZE   DEEPEN   REPERFORATE CURRENT FORMATION   SUBSTITUTION   DEEPEN COMPARILY ABANDON   CASING REPAIR WELL CASING   FRACTURE TREAT   SIDETRACK TO REPAIR WELL CASING   FRACTURE TREAT   SIDETRACK TO REPAIR WELL CASING   FRACTURE TREAT   SIDETRACK TO REPAIR WELL CASING REPAIR   NEW CONSTRUCTION   TEMPORARILY ABANDON   CHANGE TO REVIOUS PLANS   OPERATOR CHANGE   TUBING REPAIR   NEW CONSTRUCTION   TEMPORARILY ABANDON   CHANGE TUBING   CHANGE WELL NAME   PLUG BACK   WATER DISPOSAL   CHANGE WELL NAME   PLUG BACK   WATER DISPOSAL   CHANGE WELL NAME   PLUG BACK   WATER DISPOSAL   CHANGE WELL NAME   PRODUCTION (START/RESUME)   WATER SHUT-OFF   COMMISSION FORMATIONS   RECLAMATION OF WELL STITE   CONVERT WELL TYPE   RECOMPLETE OFFERENT FORMATION   Change   CHANGE WELL STITUS   RECLAMATION OF WELL STITE   CONVERT WELL TYPE   RECOMPLETE OFFERENT FORMATION   Change   CHANGE WELL STATUS   RECLAMATION OF WELL STITE   CONVERT WELL TYPE   RECOMPLETE OFFERENT FORMATION   Change   CHANGE WELL STATUS   RECLAMATION OF WELL STITE   CONVERT WELL TYPE   RECOMPLETE OFFERENT FORMATION   Change   CHANGE WELL STATUS   RECLAMATION OF WELL STITE   CONVERT WELL TYPE   RECOMPLETE OFFERENT FORMATION   Change   CHANGE WELL STATUS   RECLAMATION OF  |   | tached  |  |  | соинту: Attached   |  |
| TYPE OF SUBMISSION    TYPE OF ACTION   TYPE OF ACTION   REPERFORATE CURRENT FORMATION   TUBING REPAIR   NEW CONSTRUCTION   TUBING REPAIR   NEW CONSTRUCTION   TUBING REPAIR   NEW CONSTRUCTION   REPORT OF FLARE   NEW CONSTRUCTION   RECOMMENCE SHOULD REPORT OF THE RECOMMENT OF WELL SITE   OTHER OBJECT NAME   CONVERT WELL TYPE   RECOMPLETE - DIFFERENT FORMATION   RECOMPLETE - DIFFERENT FORMATION   Change   CONVERT WELL TYPE   RECOMPLETE - DIFFERENT FORMATION   CHANGE WELL STATUS   CONVERT WELL TYPE   RECOMPLETE - DIFFERENT FORMATION   CHANGE WELL STATUS   CONVERT WELL TYPE   RECOMPLETE - DIFFERENT FORMATION   CHANGE WELL STATUS   CONVERT WELL STATUS   CONVE | QTR/QTR, SECTION, TOWNSHIP, RAN   | GE, MERIDIAN:   |  |  |  |  |
| TYPE OF SUBMISSION    TYPE OF ACTION   TYPE OF ACTION   REPERFORATE CURRENT FORMATION   TUBING REPAIR   NEW CONSTRUCTION   TUBING REPAIR   NEW CONSTRUCTION   TUBING REPAIR   NEW CONSTRUCTION   REPORT OF FLARE   NEW CONSTRUCTION   RECOMMENCE SHOULD REPORT OF THE RECOMMENT OF WELL SITE   OTHER OBJECT NAME   CONVERT WELL TYPE   RECOMPLETE - DIFFERENT FORMATION   RECOMPLETE - DIFFERENT FORMATION   Change   CONVERT WELL TYPE   RECOMPLETE - DIFFERENT FORMATION   CHANGE WELL STATUS   CONVERT WELL TYPE   RECOMPLETE - DIFFERENT FORMATION   CHANGE WELL STATUS   CONVERT WELL TYPE   RECOMPLETE - DIFFERENT FORMATION   CHANGE WELL STATUS   CONVERT WELL STATUS   CONVE | 11 CHECK APPE   | ROPRIATE BOXES TO INDICAT   | TE NATURE C  | F NOTICE, REPOR  | RT, OR OTHER DATA  |  |
| CASING REPAIR VIOLENTIAN   CASING   FRACTURE TREAT   SIDETRACK TO REPAIR VIELL COMMENT PORMANIAN   CASING REPAIR VIOLENTIAN   C   |   |   |  |  |  |  |
| NAME (PLEASE PRINT) Morgan Anderson  TITLE Regulatory Affairs Analyst  6/23/2010   | (Submit in Duplicate)  Approximate date work will start:  6/14/2010  SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion:  12. DESCRIBE PROPOSED OR CO  Effective June 14, 2010 Que change involves only an in employees will continue to continue to be covered by Federal Bond Number: 96  Utah State Bond Number: Fee Land Bond Number: 79944 | ALTER CASING  CASING REPAIR  CHANGE TO PREVIOUS PLANS  CHANGE WELL NAME  CHANGE WELL STATUS  COMMINGLE PRODUCING FORMATIONS  CONVERT WELL TYPE  MPLETED OPERATIONS. Clearly show all puestar Exploration and Production ternal corporate name change as be responsible for operations of bond numbers:  5002976 (BLM Reference No. E. 965003033)  965003033  965003033  765010693 | FRACTURE T NEW CONSTITUTE OPERATOR O PLUG AND AR PLUG BACK PRODUCTION RECLAMATIO RECOMPLETI Pertinent details included the Company of the properties SB000024) | RUCTION CHANGE BANDON H (START/RESUME) IN OF WELL SITE E-DIFFERENT FORMATION Utding dates, depths, volumes Thanged its name to ority change of operations described on the a | SIDETRACK TO REPAIR WELL  TEMPORARILY ABANDON  TUBING REPAIR  VENT OR FLARE  WATER DISPOSAL  WATER SHUT-OFF  OTHER: Operator Name Change  s, etc.  QEP Energy Company. This name tor is involved. The same ttached list. All operations will |  |
| SIGNATURE DATE 6/23/2010   | the list  | y Company assumes all rights, d   | luties and obli  | gations as operator  | of the properties as described on  |  |
| This space for State use only)   |   | thanou  | DATE   | 6/23/2010  |  |  |

(5/2000)

**RECEIVED** 

JUN 2 8 2010

(See Instructions on Reverse Side)

APPROVED 61301 2009
Carles Lussell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

## Questar Exploration Production Company (N5085) to QEP Energy Company (N3700) effective June 14, 2010

|                           | епеси                                   | vc oui                                  | 10 17, | 2010                     |        |                  |      |      |   |
|---------------------------|---|---|--------|--------------------------|--------|------------------|------|------|---|
| well_name                 | sec                                     | twp                                     | rng    | api                      | entity | mineral<br>lease | type | stat | С                                       |
| Wr 16G-32-10-17           | 32                                      | 100S                                    | 170E   | 4301350370               |        | State            | OW   | NEW  | С                                       |
| STATE 1                   | 36                                      |   |        | 4304715128               | 5878   | State            | GW   | P    | <u> </u>                                |
| KAYE STATE 1-16           | 16                                      | 100S                                    |        | 4304730609               | 5395   | State            | GW   | P    |   |
| TOLL STATION ST 8-36-8-21 | 36                                      | 080S                                    |        | 4304732724               | 12361  | State            | GW   | S    | <del> </del>                            |
| GB 8A-36-8-21             | 36                                      | 080S                                    | ·      | 4304733037               | 12377  | State            | GW   | P    |   |
| GB 6-36-8-21              | 36                                      | 080S                                    |        | 4304733038               | 12378  | State            | GW   | P    |   |
| GB 2-36-8-21              | 36                                      | *************************************** |        | 4304733252               | 12527  | State            | GW   | P    |   |
| GH 1W-32-8-21             | 32                                      |   |        | 4304733570               | 12797  | State            | GW   | P    | ļ                                       |
| GH 3W-32-8-21             | 32                                      |   |        | 4304733571               | 12796  | State            | GW   | P    |   |
| GH 5W-32-8-21             | 32                                      |   |        | 4304733572               | 12828  | State            | GW   | P    |   |
| GH 7W-32-8-21             | 32                                      |   |        | 4304733572               | 12872  | State            | GW   | P    | -                                       |
| GH 2W-32-8-21             | 32                                      |   |        | 4304733744               | 13029  | State            | GW   | P    |   |
| GH 4W-32-8-21             | 32                                      |   |        | 4304733745               | 13029  |                  |      | P    |   |
| GH 8W-32-8-21             | 32                                      | 080S                                    |        | 4304733746               |        | State            | GW   |      |   |
| OU GB 3W-16-8-22          | 16                                      | 080S                                    |        | 4304733740               | 13030  | State            | GW   | P    |   |
| OU GB 5W-16-8-22          | 16                                      |   |        | 4304733752               | 13577  | State            | GW   | P    |   |
| GH 6W-32-8-21             |   |   |        |                          | 13570  | State            | GW   | P    |   |
| OU GB 11W-16-8-22         | 32                                      |   |        | 4304733753               | 13036  | State            | GW   | P    |   |
| GH 5G-32-8-21             | 16                                      |   |        | 4304733754               | 13582  | State            | GW   | P    |   |
|                           | 32                                      |   |        | 4304733866               | 13037  | State            | OW   | P    |   |
| GB 1W-36-8-21             | 36                                      |   |        | 4304733944               | 13439  | State            | GW   | P    |   |
| WV 2W-2-8-21              | 02                                      |   |        | 4304734034               | 13678  | State            | GW   | P    |   |
| GB 6W-25-8-21             | 25                                      |   |        | 4304734121               | 13440  | Fee              | GW   | P    |   |
| GB 7W-25-8-21             |   |   |        | 4304734122               | 13436  | Fee              | GW   | P    |   |
| WV 9W-16-7-21             |   |   |        | 4304734324               |        | State            | GW   | LA   |   |
| OU GB 11W-30-8-22         |   |   |        | 4304734392               | 13433  | Fee              | GW   | P    |   |
| OU GB 4W-16-8-22          |   |   |        | 4304734598               | 13579  | State            | GW   | P    |   |
| OU GB 10W-16-8-22         |   |   |        | 4304734616               |        | State            | GW   | LA   |   |
| OU GB 12W-16-8-22         |   |   |        | 4304734617               | 13697  | State            | GW   | P    |   |
| OU GB 13W-16-8-22         |   |   |        | 4304734618               | 13611  | State            | GW   | P    |   |
| GB 14MU-16-8-22           | 16                                      | 080S                                    | 220E   | 4304734619               | 14196  | State            | GW   | P    |   |
| OU GB 15W-16-8-22         | 16                                      | 080S                                    | 220E   | 4304734622               | 13595  | State            | GW   | P    |   |
| OU GB 16W-16-8-22         | 16                                      | 080S                                    | 220E   | 4304734655               | 13815  | State            | GW   | P    |   |
| OU GB 2W-16-8-22          |   |   |        | 4304734657               | 13721  | State            | GW   | P    | *************************************** |
| OU GB 6W-16-8-22          |   |   |        | 4304734658               | 13592  | State            |      | P    |   |
| OU GB 8W-16-8-22          |   |   |        | 4304734660               | 13769  | State            | GW   | TA   |   |
| OU GB 9W-16-8-22          |   |   |        | 4304734692               | 10,05  | State            | GW   | LA   |   |
| OU GB 15G-16-8-22         |   |   |        | 4304734829               | 13777  | State            | OW   | S    |   |
| GB 7MU-36-8-21            |   |   |        | 4304734893               | 14591  | State            | GW   | P    |   |
| GB 3W-36-8-21             |   |   |        | 4304734894               | 13791  | State            | GW   | P    |   |
| NC 8M-32-8-22             | *************************************** |   |        | 4304734897               | 13/71  |                  |      | ļ    |   |
| NC 3M-32-8-22             |   |   |        | 4304734899               |        | State            | GW   | LA   |   |
| GB 5W-36-8-21             |   |   |        | 4304734899               | 12000  | State            |      | LA   |   |
| GB 4MU-36-8-21            |   |   |        | 4304734925<br>4304734926 | 13808  |                  |      | P    |   |
| NC 11M-32-8-22            |   |   |        | 4304734926<br>4304735040 | 14589  | State            |      | P    |   |
| GB 5SG-36-8-21            |   |   |        |                          | 14015  |                  | GW   | LA   |   |
| SC 13ML-16-10-23          |   |   |        | 4304735155               | 14015  | State            | GW   | P    |   |
| SC 3ML-16-10-23           |   |   |        | 4304735281               | 14036  |                  |      | P    |   |
| SC 11ML-16-10-23          |   |   |        | 4304735282               | 14014  |                  |      | P    |   |
|                           |   |   |        | 4304735311               | 14035  |                  |      | P    | ·                                       |
| WH 13G-2-7-24             |   |   |        | 4304735484               | 14176  | State            | D    | PA   |   |
| FR 9P-36-14-19            |   |   |        | 4304735880               | 14310  | State            | GW   | P    |   |
| CB 13G-36-6-20            | 36                                      | 060S                                    | 200E   | 4304735969               |        | State            | OW   | LA   |   |

Bonds: BLM = ESB000024 BIA = 956010693 State = 965010695

## Questar Exploration Production Company (N5085) to QEP Energy Company (N3700) effective June 14, 2010

|                  |     |            | 10 17, 2                                |            |        |                  |                   |      |              |
|------------------|-----|------------|---|------------|--------|------------------|-------------------|------|--------------|
| well_name        | sec | twp        | rng                                     | api        | entity | mineral<br>lease | type              | stat | С            |
| WH 2G-2-7-24     | 02  | 070S       | 240E                                    | 4304736259 |        | State            | GW                | LA   |              |
| WH 4G-2-7-24     | 02  | 070S       | 240E                                    | 4304736261 |        | State            | GW                | LA   |              |
| FR 1P-36-14-19   | 31  | 140S       | 200E                                    | 4304736300 | 14859  | State            | GW                | P    |              |
| WK 3ML-2-9-24    | 02  | 090S       | 240E                                    | 4304736723 |        | State            | GW                | LA   |              |
| WK 7ML-2-9-24    | 02  | 090S       | 240E                                    | 4304736724 |        | State            | GW                | LA   |              |
| SC 5ML-16-10-23  | 16  |            |   | 4304736877 | 15125  | State            | GW                | P    | 1            |
| SC 12ML-16-10-23 | 16  |            |   | 4304736878 | 15053  | State            | GW                | P    |              |
| SC 14ML-16-10-23 | 16  | 100S       | 230E                                    | 4304736908 | 15070  | State            |                   | P    |              |
| SC 4ML-16-10-23  | 16  | 100S       | 230E                                    | 4304736912 | 15208  | State            | GW                | P    |              |
| FR 3P-36-14-19   | 36  | 140S       | 190E                                    | 4304737376 | 15736  | State            | GW                | P    | 1            |
| BZ 12ML-16-8-24  | 16  | 080S       | 240E                                    | 4304737670 |        | State            | GW                | LA   |              |
| BZ 10D-16-8-24   | 16  | 080S       | 240E                                    | 4304737671 | 15979  | State            | GW                | S    | 1            |
| BZ 14ML-16-8-24  | 16  | 080S       | 240E                                    | 4304737672 |        | State            | GW                | LA   | -            |
| BBE 9W-16-7-21   | 16  |            |   | 4304737745 |        | State            | GW                | LA   |              |
| GB 10ML-16-8-22  | 16  |            |   | 4304737943 |        | State            | GW                | LA   |              |
| GB 9ML-16-8-22   |     |            | *************************************** | 4304737944 | 15851  | State            | GW                | P    |              |
| HR 2MU-2-12-23   | 02  |            |   | 4304738052 |        | State            | GW                | LA   | +            |
| HR 3MU-2-12-23   | 02  |            |   | 4304738053 |        | State            | GW                | LA   |              |
| HR 6MU-2-12-23   | 02  | 120S       | 230E                                    | 4304738054 |        | State            | GW                | LA   |              |
| HR 10MU-2-12-23  |     |            |   | 4304738055 | 15737  | State            | GW                | S    | <del> </del> |
| HR 12MU-2-12-23  |     |            |   | 4304738056 |        | State            |                   | LA   |              |
| HR 14MU-2-12-23  |     |            |   | 4304738057 |        | State            | GW                | LA   | +            |
| HR 16MU-2-12-23  |     |            |   | 4304738058 |        | State            | GW                | LA   | <del> </del> |
| FR 11P-36-14-19  |     |            |   | 4304738349 | 15899  | State            | ***************** | P    |              |
| GB 4SG-36-8-21   | 36  |            |   | 4304738764 | 16142  | State            |                   | P    |              |
| GB 7SG-36-8-21   |     |            |   | 4304738765 | 16144  | State            |                   | P    | +            |
| WF 3D-32-15-19   |     |            |   | 4304738877 | T      | State            |                   | APD  | C            |
| SCS 5C-32-14-19  |     |            |   | 4304738963 | 16759  | State            |                   | P    | +            |
| FR 7P-36-14-19   |     | ********** |   | 4304738992 | 15955  |                  |                   | P    | -            |
| SCS 10C-16-15-19 |     |            |   | 4304739683 | 16633  | State            |                   | P    |              |
| FR 6P-16-14-19   |     |            |   | 4304740350 | 1000   |                  |                   | APD  | C            |

Bonds: BLM = ESB000024 BIA = 956010693 State = 965010695



### State of Utah

#### DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

December 28, 2010

GREG BELL Lieutenant Governor

Questar Exploration & Production Co. 11002 East 17500 South Vernal, UT 84078

Re:

APD Rescinded – WF 3D-32-15-19, Sec. 32, T.15S, R.19E,

Uintah County, Utah API No. 43-047-38877

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on December 14, 2006. On December 17, 2007, December 22, 2008 and December 21, 2009 the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective December 28, 2010.

A new APD must be filed with this office for approval <u>prior</u> to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason

**Environmental Scientist** 

cc: Well File

SITLA, Ed Bonner

